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USER

February 1986

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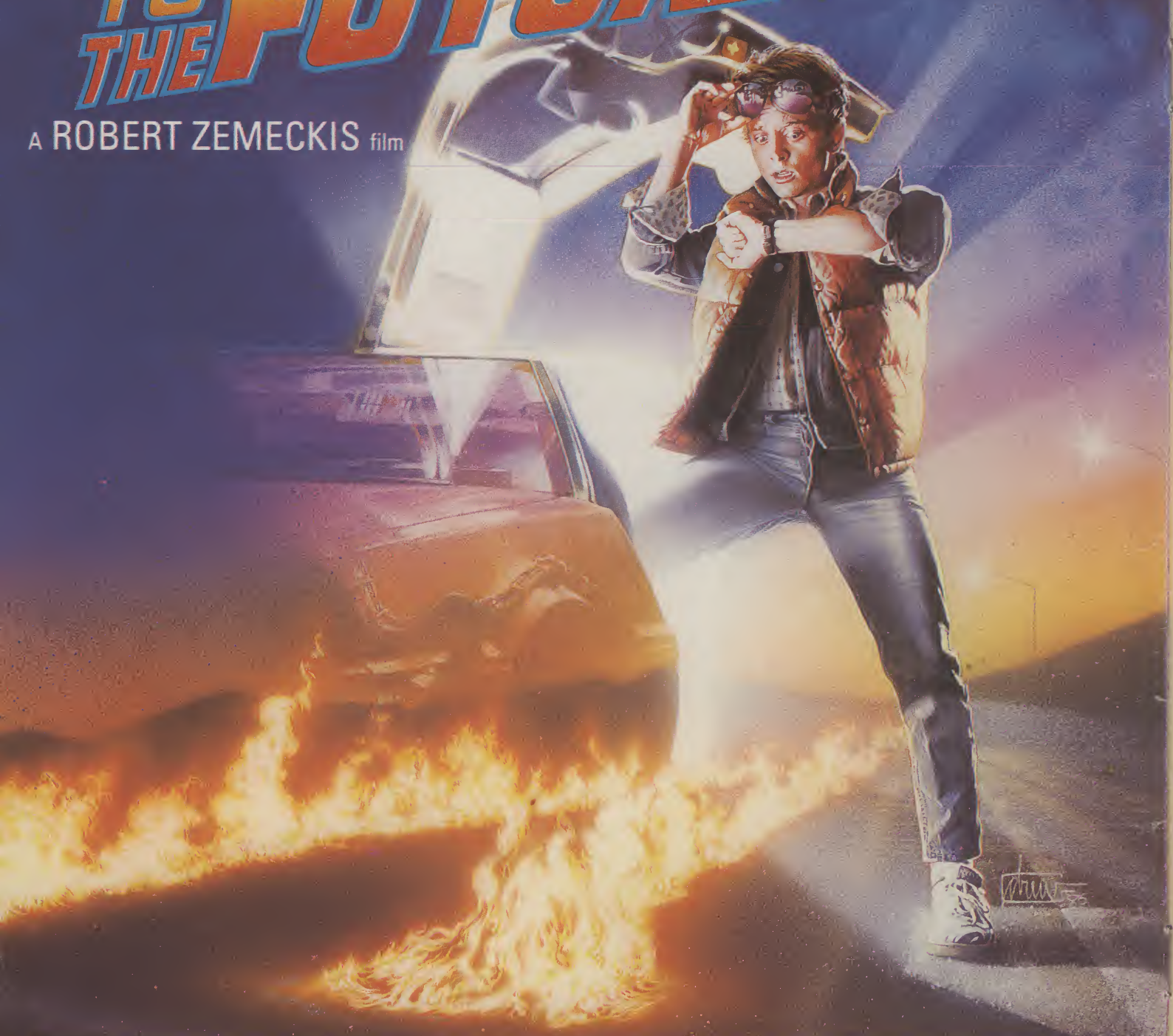
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PEOPLE

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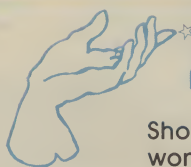
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ABC

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Imagine Software is available from selected branches of:  WHSMITH,  John Menzies, **WOOLWORTH**, LASKYS, Rumbelows, **Greens**, Spectrum Shops and all good dealers.



Max Headroom Game

Argus software are producing a computer game based on that verbose mixture of man and machine, Max Headroom.

The game is based closely on the original Max Headroom film which was recently released on video. The film, which owes a lot to the brilliant American Flagg comics, concerns a TV reporter who discovers too much

about his company producing subliminal adverts and is turned into a man-machine.

The game, Argus say, will follow the film fairly closely with you having to break into the Network 23 TV station and get Max out by breaking various security codes and puzzles.

Max Headroom will go on sale in early '86 at £7.95.

C128 trade-in offer

By now, you'll all have noticed Commodore's advert for its 128 trade-in deal: you get £50 off a 128 by handing in your old Commodore 64. If you trade in a non-Commodore machine, you get a free datasette instead.

Obviously this is just a dressed up price reduction — much needed since the corresponding Amstrad and Atari models are much cheaper. Still, the idea makes good sense since you're already getting a 64 in the new 'upgraded' machine. According to Commodore UK marketing boss, Chris Kaday: "we wanted to make it easier for people to upgrade".

That's good news for buyers, but some dealers are already complaining about getting a raw deal from Commodore — which means they're not making enough money. On top of that, they've got the added problem of returning those old and mouldy micros to Commodore in Corby.

● *And what will Commodore do with all those geriatric returned machines? Rather unsportingly, Chris Kaday won't say. We've got a pristine copy of Melbourne House's Rock'n Wrestle game waiting for whoever sends us the 'most perceptive' suggestion.*

Shorts

Super Languages: The new *Super Pascal* and *Super-C* languages for the 64/128 from First Publishing arrived too late for our 'Languages' feature last month, so here's the gen. They're both disk-based and cost £64.95 each. *Super Pascal* is a complete development package containing editor, compiler, assembler, go-faster disk operating system (DOS), debugging and monitor aids. There's also a comprehensive 220-page manual. *Super-C* has editor, compiler, linker and equally comprehensive documentation including an introduction to the language itself and a System Guide. More info from First Software on 07357 5244.

The "almost everything modem"

If you're unsure which of the many modems around will fit your 64 or 128, Miracle Technology may have the answer, with its new *64 Multimodem*. The device simply plugs into the cartridge port on your micro and into your phone socket by means of the attached cable.

For those of you in the know, Multimodem has autodial and auto-



answer, supports CCITT V21/23 and Bell 103 standards and handles baud rates of 300/300, 1200/75 and 75/1200. Confused? Suffice to say it lets you access Prestel, Micronet, Microlink, bulletin boards, telex and user to user communications. But you'll need £116 to buy it — and it won't let you access Compunet. More details on 0473 216141.



Photo by Tony Sleep

Amiga delayed

Amiga fans will be disappointed at Commodore's announcement that its new wonder-micro won't reach the UK in quantity until June. Limited supplies configured for the American NTSC TV standard will be available by March — but you won't be able to connect it to a British TV or video.

Of course, later Amigas will work under the UK PAL system, but it's still not decided where this 'European' model will be manufactured. By the time it rolls off the assembly lines the remarkable enthusiasm it continues to generate may be going stale.

The better news is that Commodore is marketing three basic entry-level software packages for the machine. Called *Textcraft*, *Graphicraft* and *Musicraft*, they're already available in the States at \$79 each. For professional graphics use, Electronic Arts has produced *Deluxe Paint*. At \$129, it's the only package that really taps the Amiga's outstanding graphics and animation features. Apparently, the word is that Commodore will have around 100 titles by March — hmm.

On the business front, news that

major US software houses like Lotus and Ashton-Tate aren't bothering with the Amiga, may dent its business potential a little. Commodore is selling its PC emulation disk at \$99 in the hope of grabbing some of the IBM PC market. Although emulation is done completely through software, some programs won't run as quickly on the

Shorts

Frantic Letters: from Plus/4 and C16 owners fretting about the software support and the future of their micros are a common occurrence in our office. Fear not, because help is at hand in the form of *Venturegate*. The Leeds-based distributors have taken it upon themselves to build-up a comprehensive list of software which they intend to sell for these two impoverished machines. For more details and a copy of the list phone 0532 6621834.

Shorts

Club Corner: Ever heard of the British Computer Society? This august body is trying to make it with the younger generation by setting up the *Association of Young Computer Enthusiasts* — AYCE to you. To join, you send them a fiver and they send you a handbook plus a monthly magazine "packed with competitions, articles, special offers" — must have got the idea from us. There's also a code of conduct to abide by. More details on 01-637 0471.

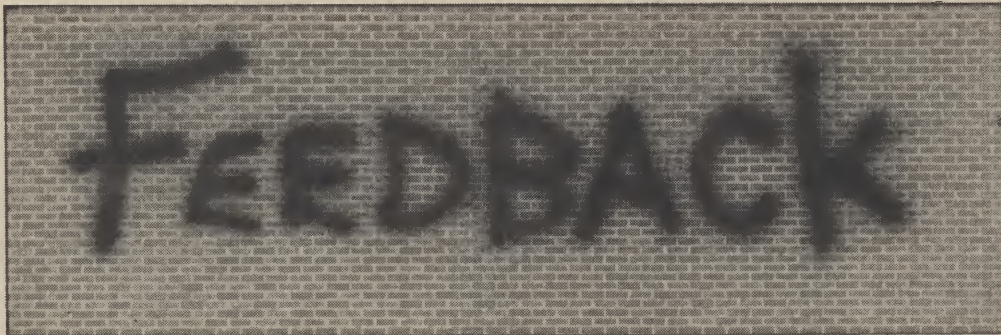
Amiga as they do on the PC and it won't let you use any of the Amiga's extra facilities — sounds dumb.

British software houses, though, like *Pegasus* and *Precision* are preparing 'custom' software for the Amiga. Commodore asserts that many more software houses are beavering away (there's around 80 Amigas in the UK now).

The general level of interest was confirmed in December at the lush three-day *Amiga Developers' Conference* in Eastbourne, attended by around 100 British firms, most of them involved in business.



What you see above may not look like much (we reckon it's rather ugly) but it took 14 months to develop, was ergonomically designed to fit the palm of your hand and uses microswitches tested 10 million times each. What could it be? Well, it's the new Konix Speedking joystick. You can get this lump of techno-sophistication for just £12.99. Konix reckon it's so reliable, they're giving you a 12 month "no quibble" guarantee. Sounds good, it feels good too. More details on 0495 711988.



C16 dream

Dear Commodore User,
We are the proud owners of the C16 and we find your magazine interesting, but we would, however, like to see more of the C16 games published.

Like many of our school friends we find that there is not many games published in magazines that we can use; so we are writing on behalf of all Commodore C16 users for more information, such as games and charts.

Lisa, Collett and Andrea Watson,
Swindon,
Wilts.

Fret not and turn to the News page.

Foreign exchange

Dear Commodore User,
In reference to the August issue of *Commodore User*, in the letters section.

The man that writes about holding the record for returning Commodore 64's. He may have the record for returning them, but I think I hold the record for travelling distances to return four (4) machines.

I work in Saudi Arabia and travelled 240 kilometres each way to buy a Commodore 64, 1541 and a Star SG-10C printer. Upon getting the machine home I found out that the 64 didn't work and had to take it back to exchange. After six round trips, I managed to get a machine that works.

I would like to know if there are any readers that are also in Saudi and if there are any "Computer Bulletin Boards" in

the Taif or Jeddah area.

Richard Weiss,
PO Box 225,
Taif,
Saudi Arabia.

Phew, anyone able to top that? We spoke to a reader who's had five 128s already.

A cynic writes

Dear Commodore User,
I am sure that you have noticed the rapid decline of the home computer industry. Prices are being slashed, extra items for use with the computer are included "free" with it or the machines are simply taken off the market (e.g. the Vic 20, and after Christmas the C16 and Plus/4 will probably join it).

So home computer manufacturers are now trying to break into the business market (e.g. Commodore with the Amiga and PC, Atari with the ST and Amstrad with it's new word processor). Manufacturers are leaving the home-computer market (or what's left of it) behind. Will the 64 be next to go? Will Commodore sign this machine's death warrant in favour of the more businesslike 128? "Never!" you cry. "It's too popular!" So was the Vic-20, remember? I hope however, that the 64 will be around for a while longer.

Oh, and congratulations on your wonderfully interesting magazine. But why T-shirts as prizes for letters? Look out of your window. It's winter. No-one wears T-shirt's in winter! Do they? I take a medium sized one. I'll save it for next summer.

Conor McCarthy,
Longford,
Eire.

● **Desperate cynicism in evidence here, but we're all cynics here, too. The 64 is safe for a while though.**

A made-up letter

Dear Commodore User,
I would like to say that your magazine is ace, brill, fab, etc. I could go on forever giving you more and more complements.

I have written to ask you if you could help me solve a problem I have. My friend and I have been arguing about your Feedback page, he reckons that all those letters have been made up by *Commodore User*, but I reckon that they are written by fellow Commodore User readers.

To stop the argument between us, could you please, please print my letter to prove that I'm right.

Daniel Hulbert,
Newport,
Gwent.

You don't think we'd fall for a trick like that, do you?

Some thoughts

Dear Commodore User,
First, I would like to say that yours is the best computer magazine for anyone with a Commodore computer. You have arcade game reviews, an adventure column, news, technical information, program listings — and business programs.

Why clutter up a perfectly good home computer magazine with business information? Most of your readers ignore it anyway, and as a few pages on the subject can't possibly compare

with a whole magazine devoted to business software, anyone interested in it will buy one of the business magazines instead.

Your competitions are good, but could you make them a bit harder? Then people who couldn't answer the questions would not have to waste a stamp and envelope, and those who could would have a better chance of winning. Also, could you print the coupons opposite the ads rather than reviews?

In response to Darryl Webb's letter in the November issue, better to have fun zapping aliens in computer games than use violence against people instead. And there are plenty of games around which do not involve any violence. Russell Wallace,
Co. Dublin,
Ireland.

● **You'd be surprised how many people read our business page. We are a user magazine and for that reason we try and cater for everyone. Not easy, but we're improving all the time.**

Space reply

Dear Commodore User,
Ref: space invader letter C.J. Hart, in December issue. The game is available in Kettering Woolworths on cartridge. Price — wait for it — £1.95!

R. Shukla,
Rothwell,
Kettering,
Northants.

Bulletin Board

Dear Commodore User,
I would like to use this way of informing you that my special bulletin board service is on line 24 hours a day.

The name of the system is S.B.B.S. Aberdeen and it has got features like downloading, electronic mail-section.

It runs on a 300 baud rate, is full duplex, 8 bit, no parity. Finally, the telephone number to access S.B.B.S. is: 0224-781919. Noel Gaddo, Aberdeen.

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Rock 'N Wrestle
Commodore 64
Melbourne House
Price: £14.95/disk
£9.95/cass

Rock 'N Wrestle from Melbourne House "the same people that brought you 'Way of the Exploding Fist' . . ." bring you the sequel to Fist. That's a tough act to follow and MBH have to be pretty confident they can deliver the goods with their wrestling game to openly invite comparisons with the award winning Karate simulation.

Fist has already scooped the Saturday Superstore Award for best game of 1985 and is being widely tipped to sweep the board at the Computer and Video Games Magazine — Golden Joystick Awards.

All of this adds up to sky high expectations on the part of gamers for Rock 'N Wrestle.

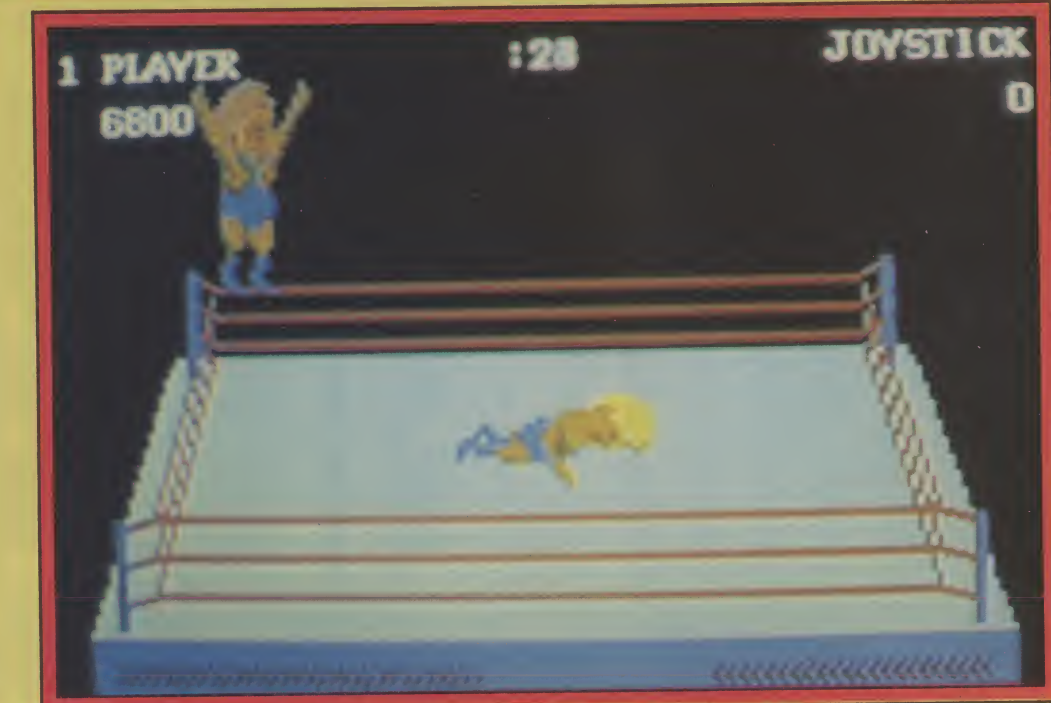
To find out if Rock 'N Wrestle really does pack the punch, Eugene Lacey went on a crash course in Rock 'N Wrestling at Melbourne House's UK office in Richmond, Surrey.

The first thing that strikes you when you wrestle with the joystick in Rock 'N Wrestle is that it is no game for lazy players.

Despite the claim in the instructions that R&W is not a "complex game to play" you are going to have to put in a lot of practice before you master the potential 26 moves.

But that should put no one off because it is this variety of potential moves that sets the game apart from any other one-on-one combat game.

Just as in Way of the Exploding Fist the various moves are executed by a combination of the eight possible positions on the joystick and by pressing — or not pressing — the fire button. If you total that as only sixteen potential moves you would be correct — for certain of the moves can only be implemented after other ones.



Flying Eagle climbs the ropes to perform the spectacular 'Turnbuckle Fly'.

For example, you cannot attempt an Aeroplane Spin, Pile Driver, or Body Slam without first executing a successful grab. Equally you cannot attempt to pin your opponent to the ground to get a pin fall without first having floored him.

The total list of moves in R&W is as follows and I am not going to tell you how to do them because I don't know (not yet, anyway) but I will describe them for you.

The Moves

Aeroplane Spin — Spin opponent above your head. Wiggling the joystick makes him spin faster, releasing fire button throws him to the canvas.

Armspin — Looks more like a Highland fling as the wrestlers spin each other round and round — the one to wiggle fastest and release the fire button first flings his opponent into the ropes.

Atomic Drop — Grab from behind, lift in a bear hug, then slam feet-first into the canvas.

Back Breaker — Same as above only bringing other wrestler down on your knee — ouch!

Turnbuckle Fly — Most exciting move to watch. Climb to the top rope on the cornerstone and then fling yourself — bird-like — at your opponent flooring him in one.

Suplex — Standard wrestling lift and throw.

Reverse Suplex — Over the

shoulder, backwards lift and throw.

Stump — Kicking your opponent whilst he's on the canvas — nasty.

Body Slam — Watch the whole ring shake as you lift your opponent high above your head and slam him into the canvas.

Headlock — Grab your opponent by the neck and squeeze.

Pile Driver — One of the most painful and effective moves in the game. Grab your opponent, lift him off the canvas, flip him over, and thrust him head first into the canvas.

Clothes Line — An extended forearm — "your opponent is hung out to dry".

Flying Body Press — Dive at your opponent's shoulders forcing him to the ground.

Georgeous Greg is about to hit the deck again as Red Neck McCoy demonstrates the Aeroplane Spin.

Kick, Headbutt, Knee Drop, Knee Kick, Charge, Drop Kick, and Arm Twist — all self explanatory. **Forearm Jolt** — this is a weakening blow to your opponent's head.

Full Nelson — "strength move enforced from the rear".

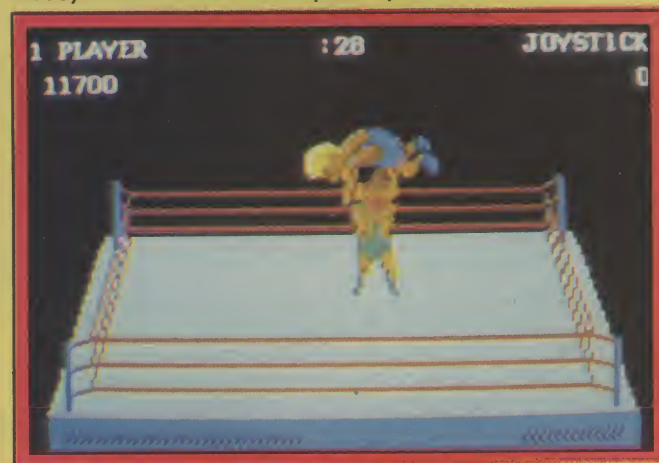
Elbow Drop — Lift your elbow high into the air and bring it down with force onto your opponent.

Pin — The key to victory. When your opponent is down pin him to the canvas for a count of three. Once you do this you will go on to a new and tougher opponent.

The Wrestlers

Georgeous Greg — That's you — the handsome, blond, hero.

Redneck McCoy — Your first opponent and a particularly tough





Southern red neck he is too.

Molotov Mick — Next up — the one eyed, shiny headed, powerhouse who packs a mean head butt.

Angry Abdul — You'd be angry too if you were the last in line to receive any of the family's huge oil wealth. Abdul likes to cheer himself up by practising his favourite wrestling move — the Pile Driver.

L.A. Bruce — This cool customer from the West Coast looks as if he just escaped from the Village People. Wrestling speciality — the aeroplane spin. "When . . . I smash 'em into the canvas it's like wow man".

Missouri Breaker — This Texas cowboy has built his muscles down home on the farm and uses them to advantage with his favourite move — the body slam.

Vicious Vivian — A Tottenham fan who learned to fight on the terraces. With a hair style like Vivian's you need to be tough.

Flying Eagle — This Apache brave is a master of technique. Appropriately his favourite move is the Turnbuckle Fly.

Bad Barney Trouble — The mystery masked man is a mean opponent. Specialises in the Clothes line, of which he says, "I love to hear them choking — it gives me a real buzz".

Lord Toff — Your final opponent and the toughest of them all. This aristocratic English gentleman knows all the moves, and executes them all with ease.

Conclusion

Describing the moves and the opponents only really scratches the surface of Rock 'N Wrestle.

There are bags of strategy besides. Stalking your opponent around the ring, learning to strike at just the right moment, when to use certain moves and when not to, and how and when to use the ropes.

Graphically there are several additional frills like the camera flashes that go off when a particularly exciting move is implemented.

There is also the music — the rock referred to in the title. I noticed two different pieces as I played, though I must admit they didn't sound particularly rocky.

Compared to Way of the Exploding Fist the graphics

do not look quite as crisp. The fact that R&W has the extra dimension of depth, i.e. you can walk behind and in front of your opponents, and the extra moves must have meant less memory was available for the animation. But this is not to say the

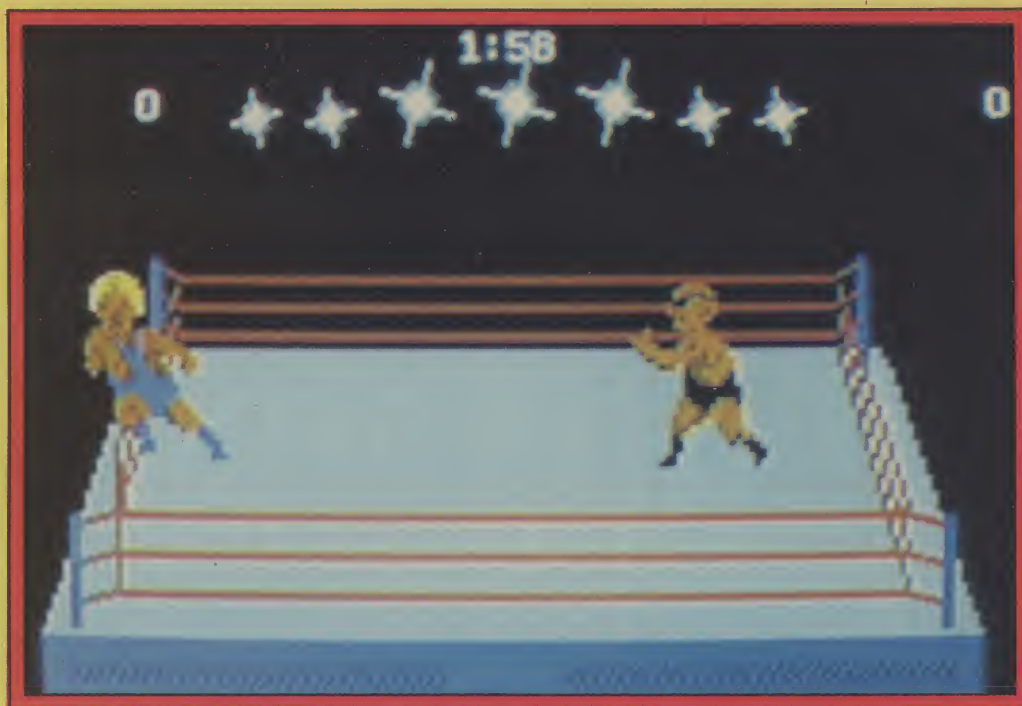
graphics are in any way inferior. When Flying Eagle leaps from the top ropes it is one of the most exciting moves I have seen yet in any 64 game.

Like Fist, R&W takes you into a whole new era of 64 arcade games. Games that

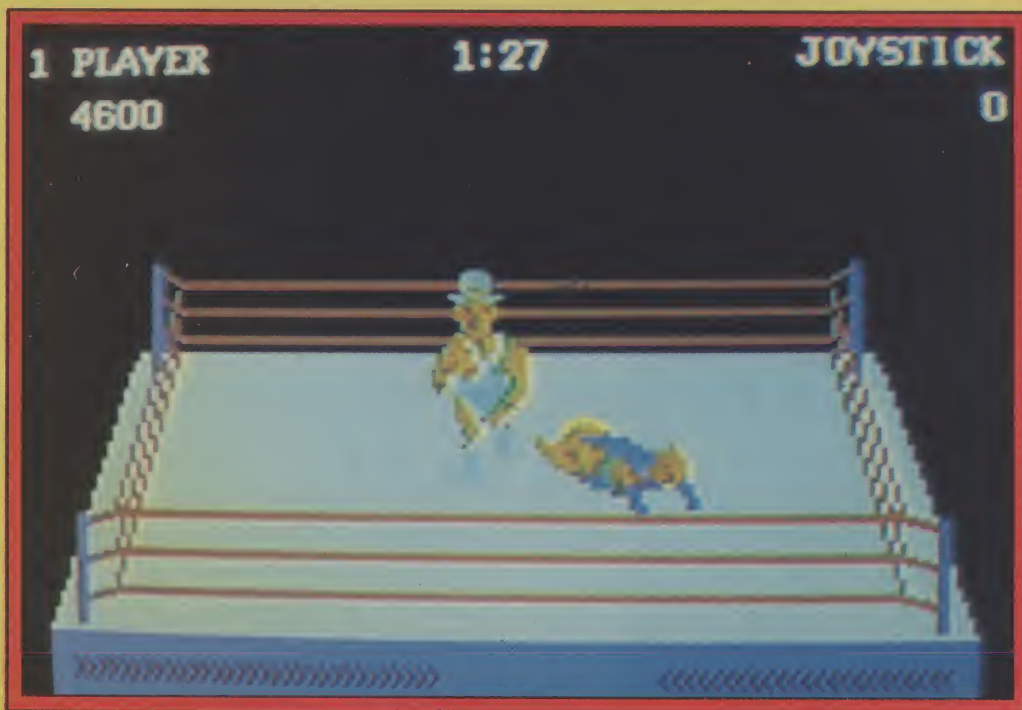
are super sophisticated, that can be played time and time again. Games that will last.

Eugene Lacey

Graphics	★★★★
Sound	★★★★
Toughness	★★★★★
Staying Power	★★★★★
Value	★★★★★



Gorgeous Greg comes off the ropes with force but Molotov Mick is ready for him.



Greg is decked again — this time by the world champion grappler, Lord Toff.



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Outlaws Commodore 64/128 Ultimate Price: £9.95/cass

There's still a certain buzz of excitement in our office when we load up an Ultimate game for the first time. A cluster of joystick-weary reviewers huddle expectantly around our battered office 64.

As the opening jingle starts to play a tussle for the joystick ensues and voices are raised. Half an hour later the 64 is deserted and I am left to write the review by myself.

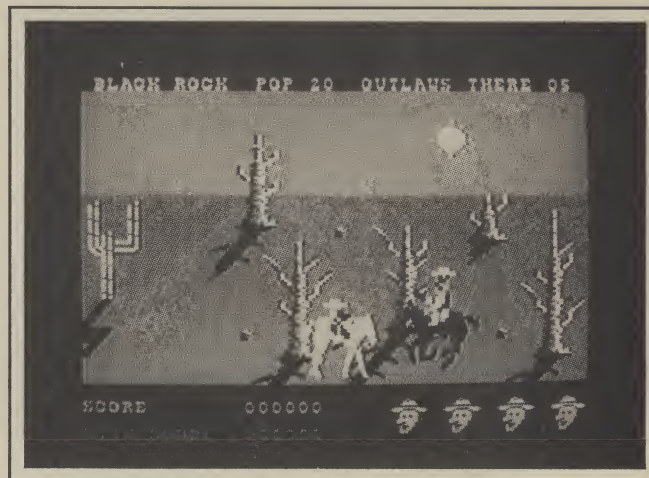
The reason for this? Disappointment. Massive disappointment at what I can hardly believe is an Ultimate game.

It's all very sad really when you look at *Outlaws*. It is just a shoot 'em up on horseback. You play the part of the Lone Rider, a mysterious gunman, Heaven-sent to rid the Wild West of

criminals, indians, and other assorted stubble-bearded nasties.

The opening screen tells you that you are now entering Dalton gang territory. The gang gallop towards you every few seconds with their guns blazing. To duck the gun-fire, you pull back on the joystick. Pop up again and let them have a burst of their own medicine. Points are earned by grounding the mounted bandits.

Outlaws is a horizontally scrolling game. Not a very extensive one. You start the game with four Lone Riders — extras can be earned by scoring highly. Your horse can gallop, canter, walk and jump. It will also throw you head first towards the ground should you happen to ride into one of the fallen trees.

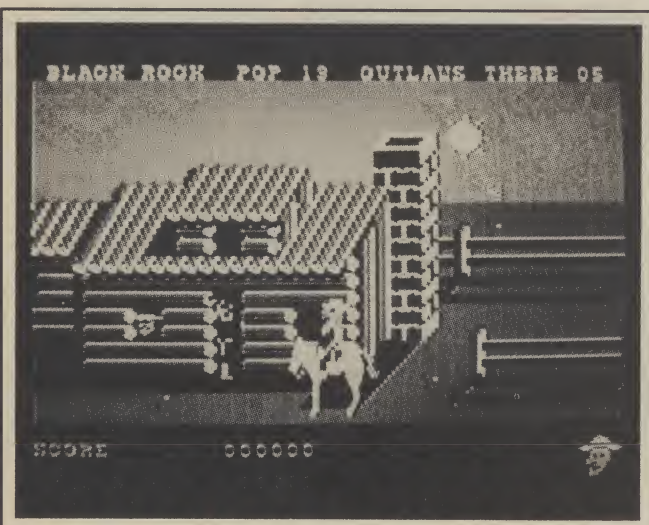


"Outlaws . . . just a shoot 'em up on horseback".

There are really just three parts to the game — the desert, the Indian encampment and the town of Little Rock where the Outlaws hide amongst the citizens, taking pot shots at the Lone Rider as they mingle with the crowd.

The outlaws dodge into view for a couple of seconds and take pot shots at you — they're a real mean bunch.

Sound is fairly effective in *Outlaws*, the horse's hooves tap away at different speeds to



Three bandits to be shot here before the game will let you ride on to the Red Indian village, to face arrows rather than bullets.

Black Rock is the scene of the final shoot out — no time to stop for a beer.



In the desert you must ride to a coral where the Dalton Gang are hiding out. Pick them off as they appear at the windows and you will be allowed into the next stage. This is the Sioux territory — fierce mounted braves who bombard you with arrows. Other hazards appear here like eagles and fire balls.

The best way to deal with this screen is just to gallop for all you're worth through the Indian camp, over gates, and hedges till you get to the boundary. All you have to do is reach this and you can get into Little Rock.

This is definitely the best part of the game. The hotel, jail, saloon, store and other buildings are all beautifully drawn. You need to be really quick on the

match its walking, cantering or galloping. The music was awful though, way below standard.

If you manage to shoot up the five outlaws in Little Rock the game then starts again — though this time there are ten outlaws and they are meaner.

I didn't go for *Outlaws*. It lacks depth. If it had a bit more to it than simply riding around the countryside shooting things up — an arcade-adventure element or a few puzzles — then it would have been more of a challenge. As a simple shoot 'em up it is just not strong enough.

Eugene Lacey

Graphics	★★★
Sound	★★
Toughness	★★
Staying Power	★★
Value	★

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Save text file	S
Load text file	L
Merge text file	M
Return to text file	R
Customise program	C
Save Tasword	T
Disc commands	D
Clear text file	X

Press required letter then RETURN

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22 Highland Court
Pulverton
Lanes LA2 6L

Mr John Davies
2 Vanguard Road
Tannock
Sussex TN3 1TE

20th December 1985

Dear John,

Thankyou for your letter of 12th December concerning our trip to France in the new year. I think that your suggestion of our flying out together from Birmingham is a good idea. It's roughly the same distance for each of us to drive and if there are any flight delays we can at least finalise some of the details over a coffee.

Let's meet at the check in desk at about 4.00p.m. If Jane finds that she can get the time off work then please let me know straight away and I'll book another seat on the flight.

I hope you don't mind me reminding you to make sure that you have your passport when you leave home! We don't really want a repeat of the last time when the

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Line 1 Col 1 R/J on W/W on Insert off Paging on F3 for help normal

T A S W O R D 6 4 H E L P P A G E

CURSOR CONTROL			
Δ↑	start of text	Δ*	end of text
Δ↓	start of line	Δ]	end of line
f↑	scroll up	f↓	scroll down
Δf↑	fast scroll up	Δf↓	fast scroll down
Δ<	word left	Δ>	word right
HOME	top of display	Δ0	40/80 columns

FORMATTING COMMANDS			
ΔQ	move text left	ΔE	move text right
ΔW	centre line	ΔU	hard justify
ΔK	justify line	ΔL	unjustify line
ΔJ	justify para		

SWITCHES					
ΔP	paging	on/off	ΔH	insert	on/off
ΔG	wordwrap	on/off	ΔF	Justify	on/off

TEXT FILE COMMANDS
 ΔRETURN for save/load/merge/print/clear
 Δ = CTRL f3 for more help ▴ = SHIFT
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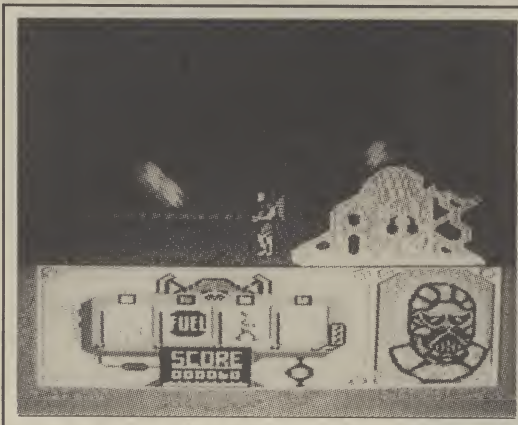
Moebius Commodore 64/128 Infinite Games Price: £9.95/cass

It's always with some hope that I load a game from an unknown software house. I hope maybe it'll be good enough to knock one of the big boys off the top.

I am sorry to report that in this case my hopes were shattered within minutes of playing the thing. It describes itself as a shoot 'em up arcade adventure which conjures up a cross between *Entombed* and *Dropzone* which is, I think, what it wishes it was. It's not, it's a mess.

Moebius is a space mercenary hired by rebels to stop a mind-bending alien called the Controller from dominating the galaxy. As Moebius you have to battle your way through many planets before you reach the Controller.

The game takes the pattern of you controlling a space figure and walking left or right across half a dozen screens until you reach a transporter. You're pursued by the local nasties on each

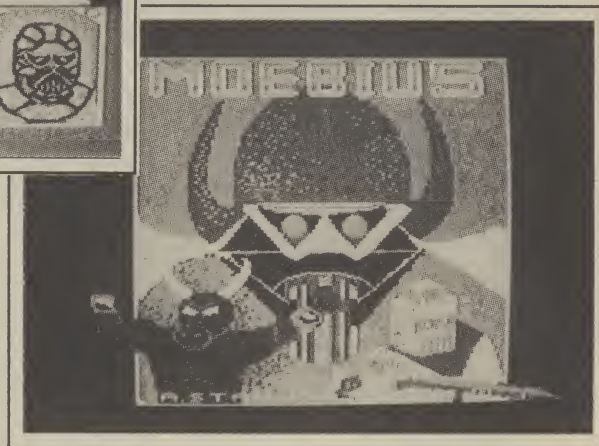


planet, all of whom have fallen under the Controller's power. For some reason these things come up and down screen and if they touch you, you explode, but if they hit an obstacle they pop harmlessly like balloons. Must be something in the water. Every time you find the transporter, you pop off to another planet which bears an uncanny resemblance to the last one. It's just had a new lick of paint while you were materialising.

En route you pick up a jetpack and a hovercar to help you avoid the nasties. I never got as far as

Left: You as Moebius dealing death to the local population. The bottom of the screen indicates fuel and mode of transport. The controller's teeth glow if you die.

Below: The loading screen — better than the rest of the game.



the latter mode of transport, I'd lost all interest and begun to wonder if maybe the headcleaner tape it came with might look more interesting if I loaded that up instead.

Mike Pattenden

Graphics	★
Sound	★
Toughness	★★★
Staying Power	★
Value	★

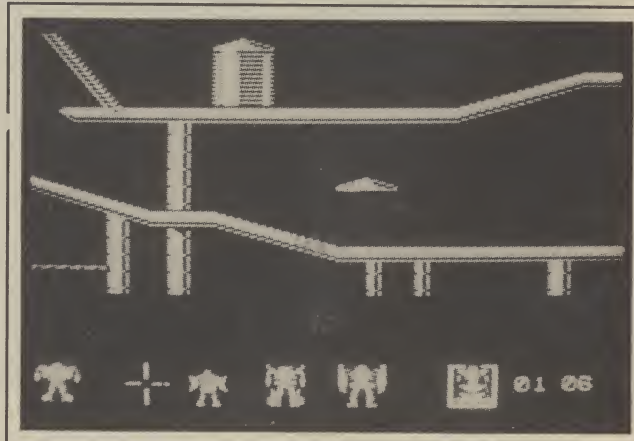
The Transformers Commodore 64/128 Ocean Price: £8.95/cass

Trust Ocean to produce a game based on what looks like being the best selling Christmas toy. Transformers are warrior robots which can be turned into different shapes by pulling them apart. Denton Designs, given the unenviable task of producing a game based on them, have stuck with the tried and tested icons of *Shadowfire*.

The square on the left is the Autobot centre where you assemble the cube.

Two robot teams fight for control of earth. The goodies are the Autobots who are trying to stop the evil Decepticons. The problem is that the Autobots have an energy crisis caused by high radiation levels. You control the five Autobots in an attempt to assemble the four pieces of an Energon cube scattered around a massive platform system. Yes, that's right it's a platform game, but only in the sense that *Impossible Mission* was.

You control the five robots individually via the icon system. The action shifts to the platforms where dustbin-like Defensa Pods



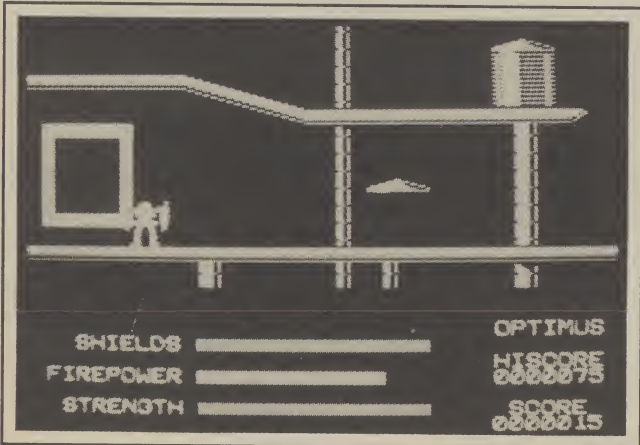
Note the Shadowfire style icons — you just know it has to be Denton.

are scattered around. These are home to your robots and can be used to replenish energy and shields which dwindle rapidly once you're moving about.

There are three modes of travel. You can walk ponderously about, transform into a vehicle or simply fly off in search of the cubes. A combination of each is advisable, but flying around is a good means of exploration. Selecting modes of travel is done by fiddling with the joystick. This takes a bit of getting used to, and after a while I was still turning into a Porsche instead of getting into my dustbin.

Graphics are good and the whole game is well put together considering the problems involved in transforming (hoho) a toy into a computer game. The idea is nothing novel, and I'm left feeling a good part of the game's difficulty is in coming to grips with the controls. As far as the platform approach goes Denton get away with it, but only just.

Graphics	★★★★
Sound	★★★
Toughness	★★★★
Staying Power	★★★★
Value	★★★

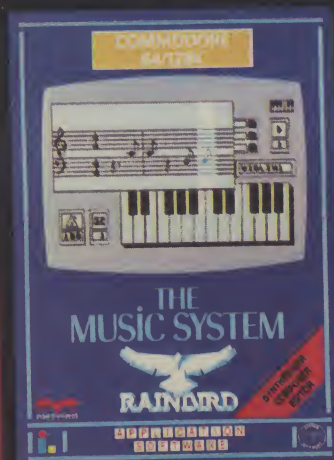


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**GOLD
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Koronis Rift
Commodore 64/128
Activision
Price: £14.99/disk
£9.99/cass

When I tell you this is one of those Epyx/Lucas films titles mentioned in Dan Gutman's article on page 65 you might sit up and take notice. You'd be right to as well, this game comes packed with all the stylish attributes of its stablemates.

You are a space scavenger travelling from galaxy to galaxy searching for abandoned gear. This time round you've struck lucky and stumbled upon the fabled Koronis Rift a treasure trove of abandoned technology. All you have to do is explore the many rifts that cut across the planet's surface in your scoutcraft and loot the mass of hulks littered around the planet's surface.

It's not as easy as that of course. The rifts are protected by the Guardian saucers, who appear just as you're about to loot one of those ships. You have to use your weapons system to shoot them down. Your use of shields is important, because different shields have different capabilities when hit by the variety of saucers that attack you. Use looted modules to update your own defence systems.

The screen displays a view of

the planet through your surface rover's window. Above that six panels provide information on shield strength, direction of hulks, power reserves and other useful facts. Some of the information isn't that clearly displayed to my mind though, particularly if you're not using a hi-res screen.

Graphics are reminiscent of the fractal kind generated in

Rescue on Fractalus. The landscape is impressive and exciting to explore. The animation inside the surface rover of your robot Psytete as he examines the looted modules is great. The gameplay is varied and challenging. There's zapping strategy, and simulation here, and with twenty progressively tough rifts to explore this game's got staying power.

I've really only scratched the surface so far, but I think you've got a good enough idea, so now go out and buy it.

Mike Pattenden

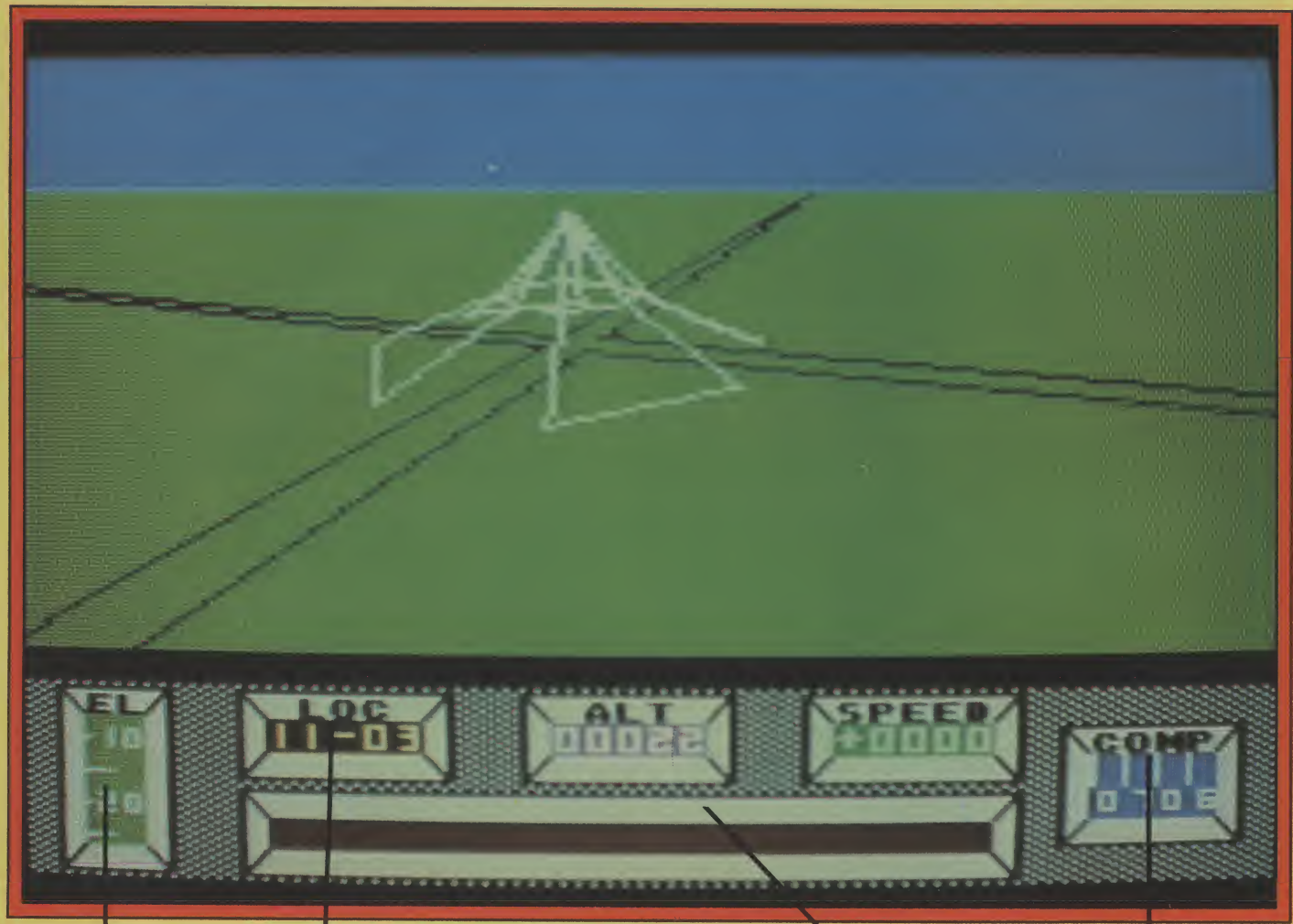
Graphics	★★★★★
Sound	★★
Toughness	★★★★
Staying Power	★★★★
Value	★★★★

Directly ahead is an abandoned hulk but you'll have to deal with that Guardian saucer first.



The fractal graphic style landscape is varied and exciting to explore.





Elevation Indicator. Location Indicator — gives your sector code. Information panel — identifies objects. Compass.





Typical Mercenary cityscape.

Mercenary
Commodore 64/128
Novagen
Price: £9.95/cass
£12.95/disk

After only a few hours playing *Mercenary*, I am convinced it's set to rival such arcade classics as *Elite* and *Summer Games*. The first Mercenary adventure, *Escape from Targ* features a unique combination of flight simulation, combat and adventure action using stunning three dimensional vector graphics.

The Plot: Your spaceship has crash-landed on the planet Targ.

The inhabitants of Targ, the Palyars, are in conflict with the alien Merchanooids and your objective is to assist one side or the other (or both) in the hope of being able to repair your ship or purchase another so that you can leave Targ. You are equipped with a fully mobile life-support system including 'Benson' your ever-faithful computer who provides your only contact with the outside world.

The arena: The Planet Targ has one main city complete with a variety of roads and buildings. You are free to move anywhere in or around buildings, and descend to the subterranean complex of rooms and passages. Objects can be examined from all

angles and moved from place to place at will, and vehicles can be purchased, stolen or borrowed to help you move around the surface of Targ more easily. The city of Targ is arranged in a rough square, and your position in the city is displayed on your console together with speed, compass altitude and elevation information, and beneath these indicators is a message window for communications. As with any arcade adventure, your first task should be to set about constructing a map — quite a daunting task!

The graphics: Vector graphics are nothing new, but it's unusual to see images of this quality working to this speed on the 64,

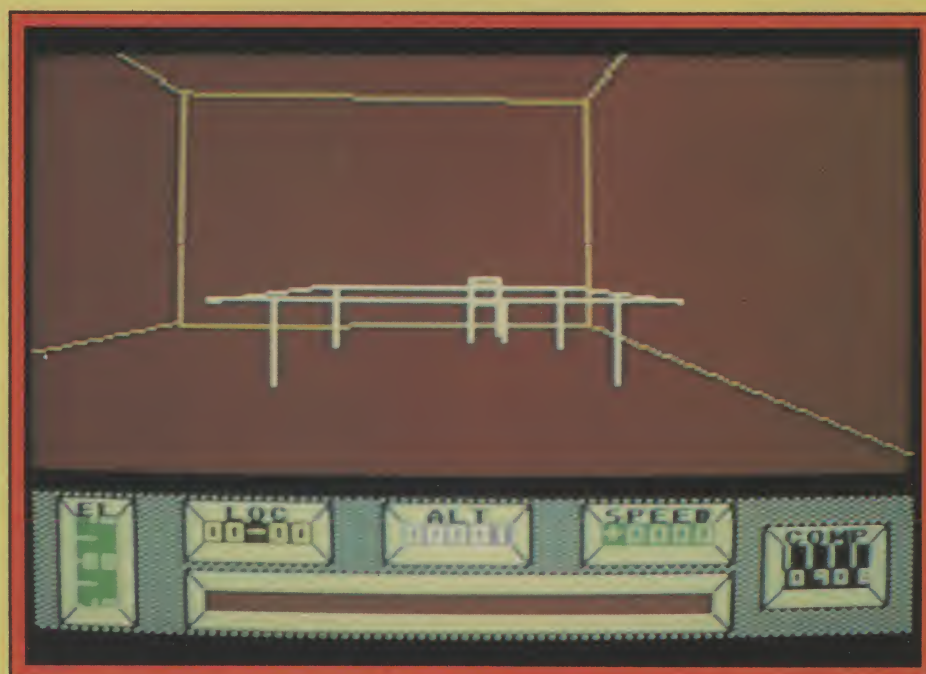
and believe me, the action is fast and furious. No music here though, and sound is restricted to bleeps bangs and wooshes. Bit of a shame that, but I suppose there was no room for graphics and music.

Mercenary looks like staying at the front of my collection for some time to come, and I'm looking forward to seeing other games from Novagen under the Mercenary umbrella in the future.

Fred Reid

Graphics	★★★★★
Sound	★
Toughness	★★★★★
Staying Power	★★★★★
Value	★★★★

Below left: Energy Crystals come in useful. Below Middle: Catering Provisions identified. Below Right: The briefing room — for mission instructions.



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... OVER ! ...”

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Deus Ex Machina Commodore 64 Electric Dreams Price: £9.95/cass

Automata, the software house which originally produced this title, seem to have had no luck with it at all. Before its release on the Spectrum over a year ago it was trumpeted as an entirely new development in home entertainment, because the action on screen is synchronised to a separate recorded stereo soundtrack (played through an ordinary audio cassette player).

A cast of stars including Jon Pertwee, Ian Dury and Frankie Howerd were paid to provide the voices which accompany Mel Croucher's strange musical creation. All of which led to a great deal of publicity and media interest

Despite this, the title bombed, leading Automata to make bitter accusations against certain distributors for refusing to take the product. An attempt to release it on the 64 back in the spring of '85 also evidently failed to take off. So it is strange, to say the least, that Electric Dreams now think they can make a go of it.

The program is as much a curious piece of philosophy as anything else. It puts you in the role of a being developing from

conception (yes, literally — in one section you have to guide a sperm cell toward an egg while listening to Ian Dury saying 'I'm a fertilising agent') through to the grave, the idea being to nourish and preserve yourself as much so as to maintain a high percentage life-score. (*Heavy! Ed.*)

The audio cassette lasts about 30 minutes each side, and while it is playing, the program progresses through about 13 different

sections, each a sort of mini-game in its own right.

For example, while listening to Donna Bailey crooning 'I am Machine, I have always been', (so deep, so meaningful), you have to nourish the eggs which are supposedly incubating in the heart of the machine by moving a cursor around the screen keeping them spinning. In another section you have to jump whenever commanded by a voice on the

tape — so long as you've synchronised it correctly with the start of the program, this should coincide with the appearance of obstacles to be leaped over.

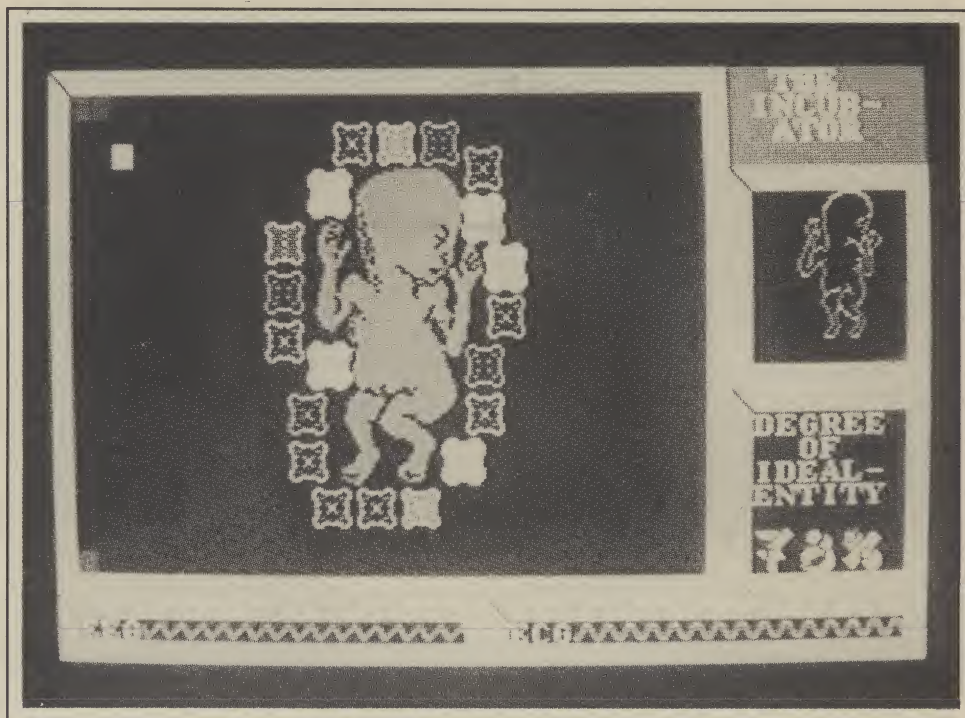
This brings us to the main flaw with this package — the gameplay just isn't all that interesting. The fact is that severe restrictions are placed by the need for the action to continue in time with the tape regardless of what you do.

Having said that the package is, without question very original. And there is much to admire in parts of the programming, including some excellent graphics (although only in places).

The soundtrack too, although ridiculously pretentious as far as the philosophy is concerned, is interesting and enjoyable in its own way. All the musical effects were created by Mel Croucher using various synthesizers, guitars and percussion. The results won't be to everyone's taste, but they're certainly atmospheric and at times almost hypnotic.

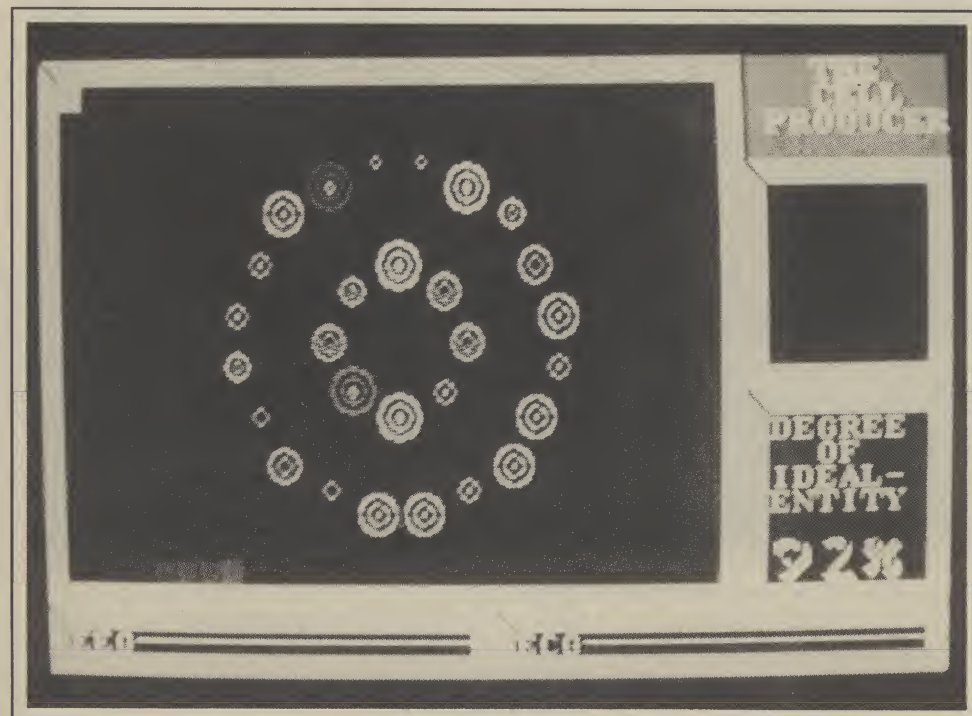
But we're still left with the fatal flaw. Most people having played through this a couple times aren't, I think, going to return to it. It's an interesting experience, but only as a one-off.

Chris Anderson

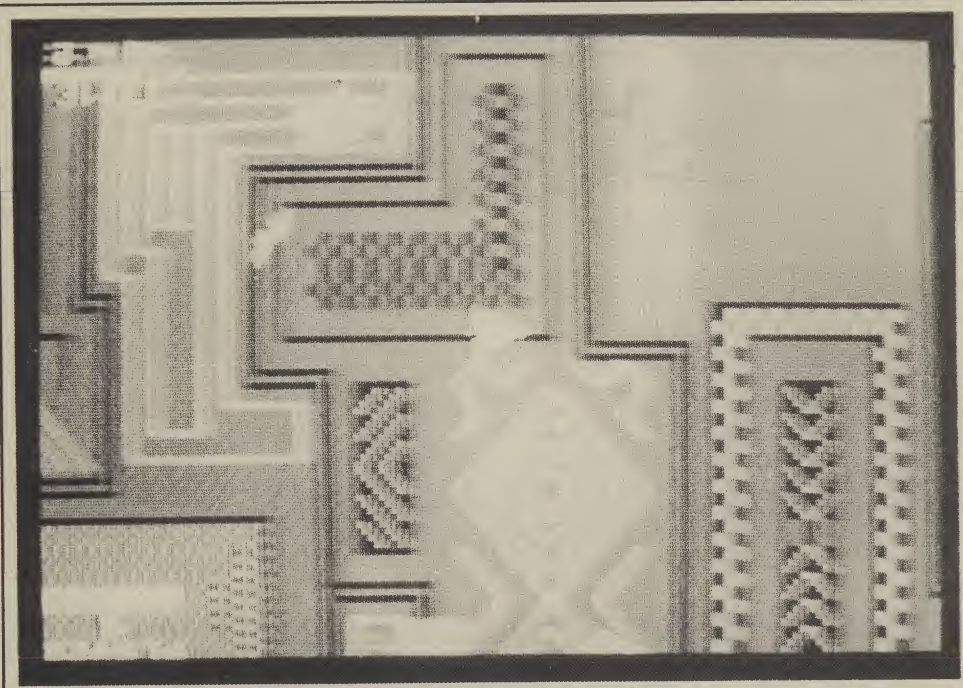


Deus Ex Machina — "the gameplay just isn't all that interesting".

"an interesting experience, but only as a one off".



Graphics	★★★★
Sound	★★★★★
Toughness	★★★
Staying Power	★
Value	★★★



"Graphically the game is a little sparse".

Space Pilot 2
Commodore 64
Anirog
Price: £7.95/cass
£9.95 disk

This game's 1984 predecessor, *Space Pilot*, was a conversion to the 64 of *Time Pilot*, a coin-op game which enjoyed a popular spell a couple of years ago. The

idea was simply to service as long as possible guiding a small plane around a multi-scrolling screen blasting enemy craft, which began as biplanes and

graduated through the time zones to futuristic combat jets.

Space Pilot 2, logically enough, is based on the more recent version of the arcade game. It is actually not much different except that the background has switched from a cloud-filled sky to a series of eight strange landscapes. Keep flying in any one direction long enough and they wrap round. But as the inlay warns, you shouldn't be distracted by their 'awesome, futuristic beauty' since they have no bearing on the action.

You have a view looking down on the action as your space craft moves over the scenery. You cannot alter its altitude or speed, only the direction it travels in. Using key control there's simply one key to rotate left, one to rotate right and one to fire. (Use of joystick takes longer to adjust to. Moving the stick will cause the craft to rotate slowly until it is facing the appropriate direction.)

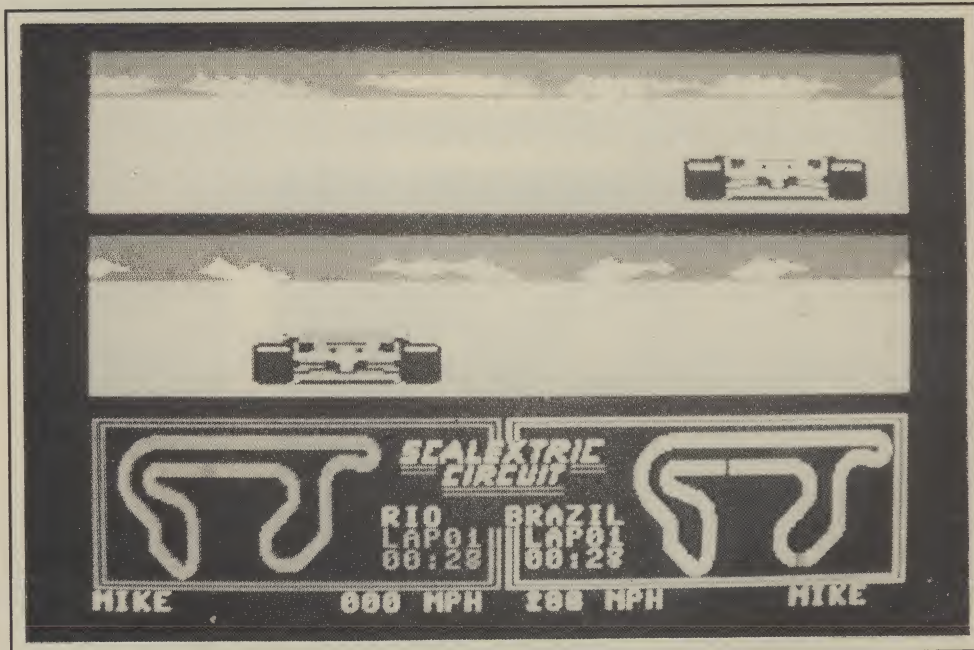
Alien star-fighters of different varieties appear from the edges of the screen to attack you, both singly and in formation. You have the choice of blasting or avoiding, the aim simply being to survive each wave for two minutes. Each successive wave

Scalextric
Commodore 64
Leisure Genius
Price: £9.99/cass

Just about everyone must, at some time or other, have played *Scalextric*. I remember piecing together the track for hours and setting the scene before sending my Lotus hurtling round the track and through a pile of soldiers I'd put in the way.

This licensed version allows you to do everything you did with the real thing bar running down the soldiers and terrifying the dog. But what it comes down to in the end is a racing game.

You have the option to build your own track piece by piece like the toy (except none of the bits are warped or missing) or you can go straight for a readymade Grand Prix circuit. Select the number of laps and the quality of your opposition and you're away. Just one point about making your own track — don't get too carried away when you make it otherwise you'll never get the thing to meet at the



Pitstop style split screen and position on circuit.

start again. It's certainly a nice idea to make your own convoluted race course.

With all this completed the game becomes a simple head-to-

head challenge with the computer or a friend. The screen is split like *Pitstop II* to give two opposing views. So we come to the crunch. Is it as good? The

answer is no. The controls are imprecise, and the feeling you get racing around is not as good as either *Pitstop* or *Pole Position*. Playing the computer I found that

brings a new set of aliens, naturally more deadly.

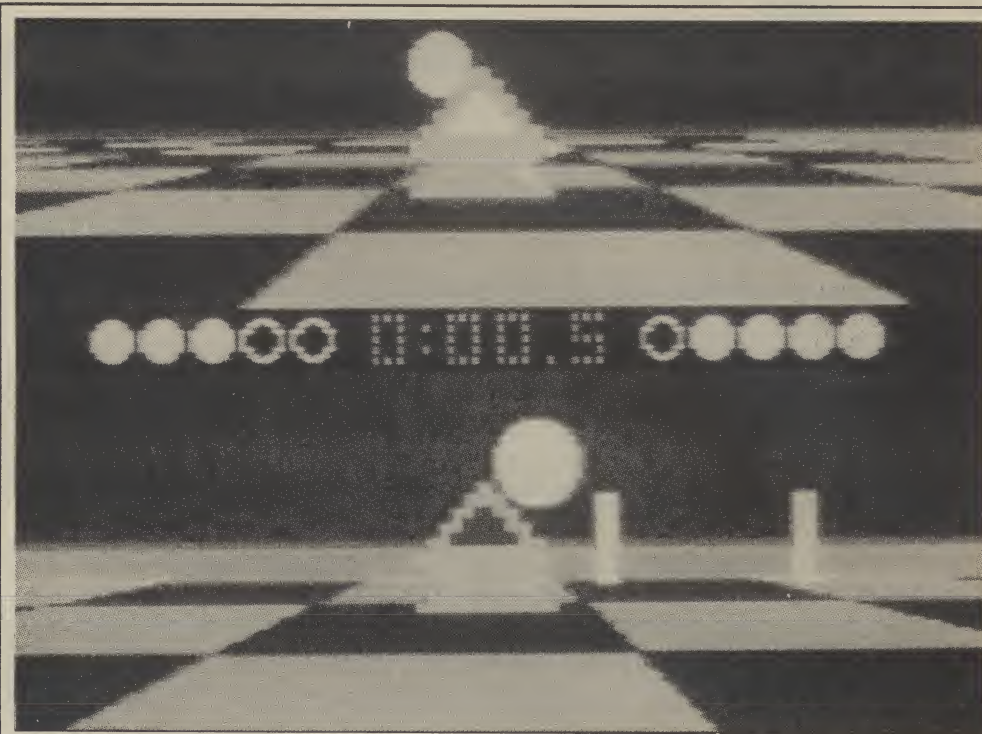
While wave one is a doddle, wave two sees the introduction of heat-seeking missiles which fly faster than you do and track you until either you or they are destroyed. In later waves these start to move at almost impossible speeds.

Graphically the game is a little sparse, apart from the irrelevant backgrounds. The sprites used for the various craft are run-of-the-mill. Sound too has nothing notable — some strange music clearly created by a programmer rather than a musician, and the usual whines, blasts and rumbles.

One poor feature is the excessively long pause at the start of each wave and each life. You're likely to do quite a lot of dying to begin with, and the waiting around is annoying to say the least.

It's hard to see this title winning a following outside die-hard addicts of the arcade game. Although competently done there isn't enough variety to make it more than just an average shoot-em-up. I found it frustrating rather than addictive.

Chris Anderson



The split screen indicates relative positions on the grid. The bottom screen indicates your opponent has his back to the goal.

Graphics	★★★
Sound	★★
Toughness	★★★★
Staying Power	★★
Value	★★

Ballblazer Commodore 64/128 Activision Price: £9.99/cass

It is the year 3097 and the Football League has gone to the logical conclusion of its present day actions and abolished soccer altogether. Instead you spend your Saturday afternoons on the terraces of an interstellar asteroid watching a couple of rotofoils belting up and down a grid after a ball. The national game is now Ballblazer.

The screen is split into two halves à la Pitstop II. You are strapped into a rotofoil — a sort of jet powered bathchair — and before you is an enormous green grid stretching into the distance. Out there somewhere is your opponent — the grid curves, so he maybe behind the horizon. A klaxon sounds and the ball is shot somewhere onto the grid. All you have to do is locate it and put it away between the goal beams that maraud around the pitch boundaries. This all takes place at the speed of light (or so it seems).

It's particularly important to work with one eye on either screen because you need to know where your opponent is, and more importantly where he is headed if he has possession. It can also work to your benefit if

you can place yourself in front of him. Much of the work is actually done for you, your rotofoil locks into the ball constantly, and when you are close enough its 'pullfield' holds the ball for you. Then it's just a question of racing downfield for goal and avoiding your opponent who will try and dispossess you by firing the ball from your energyfield. A buzzing noise alerts you that you are in a position to fight for the ball.

The idea is very simple, but I'm not sure if that lends it any beauty. It gave me little satisfaction to beat a droid (on lower levels naturally) and even less from scoring. This must really be the acid test — if it's no fun to score what's the point. Playing a human opponent improved this slightly, but I couldn't help feeling inhibited by the constraints of the game, which is otherwise very cleverly programmed. Something was missing, some aggression maybe.

Mike Pattenden

Graphics	★★★★
Sound	★★★
Toughness	★★★★
Staying Power	★★★
Value	★★★

it was capable of screaming around the circuit, pouring the speed on at the bends, whilst my car's tyres protested and the vehicle drifted all over the shop into the kerb. I also discovered that if I let him by and overtake, lap me and pulled over at the last second he'd crash every time.

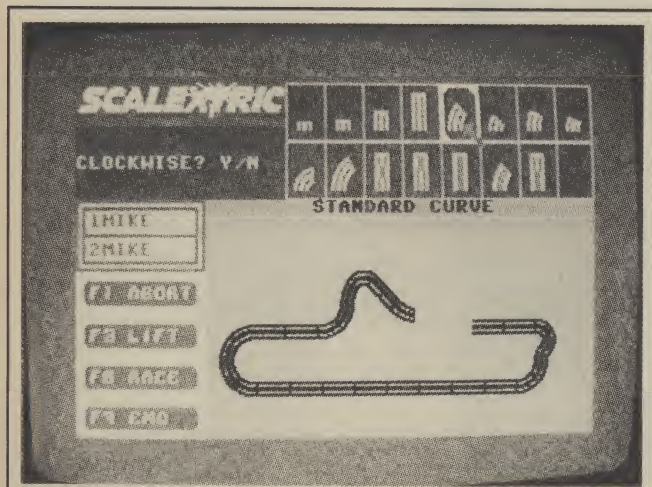
The fun of these kind of games is in the overtaking so you're bet-

ter off playing a friend, but as far as the quality of the simulation and the gameplay goes I'd stick with a copy of one of the above games and the kit itself.

Mike Pattenden

Graphics	★★★
Sound	★★
Toughness	★★★
Staying Power	★★
Value	★★★

Slot your own track together.





Enigma Force Beyond Software Micropower Price: £9.95/cass

I'll come out with it straight away. *EnigmaForce* is superb. The programmers at Denton Design who produced the stunningly original *Shadowfire* for Beyond have done it again.

EnigmaForce is far more than just a follow up to *Shadowfire*. It breaks significant new ground in computer gaming.

A quick description of it would be *Shadowfire* with animation'. *Shadowfire's* innovative system of issuing commands by selecting from a range of picture symbols (icons) has been retained, except that now instead of having to move back and forward between various menus, all the commands are accessible from a single menu in the bottom half of the screen. (Because there are so many options, the menu is too big to fit this area, but if you want to access an off-screen option, you simply move the cursor to the edge of the screen and the menu scrolls. Beautiful.)

The big difference with this game, is that as you issue commands you actually see them being carried out on screen by animated figures. The top half of the screen is assigned to this display of what's going on.

To give an example, if you select the picture which means 'pick up an object', followed by a symbol of one of the objects in the current location, the character under your control will move to the object and pick it up. Select the 'move East' arrow and

the character will move right through a sliding door and appear in a new location.

The range of activities to select from is reasonably large. You can move in four directions, pick up and drop objects, load weapons with various types of ammunition and 'activate' objects (the effect here depends on the object — activating a fish, in other words eating it, gives you energy, while activating explosives means priming them to explode in 30 seconds. All this

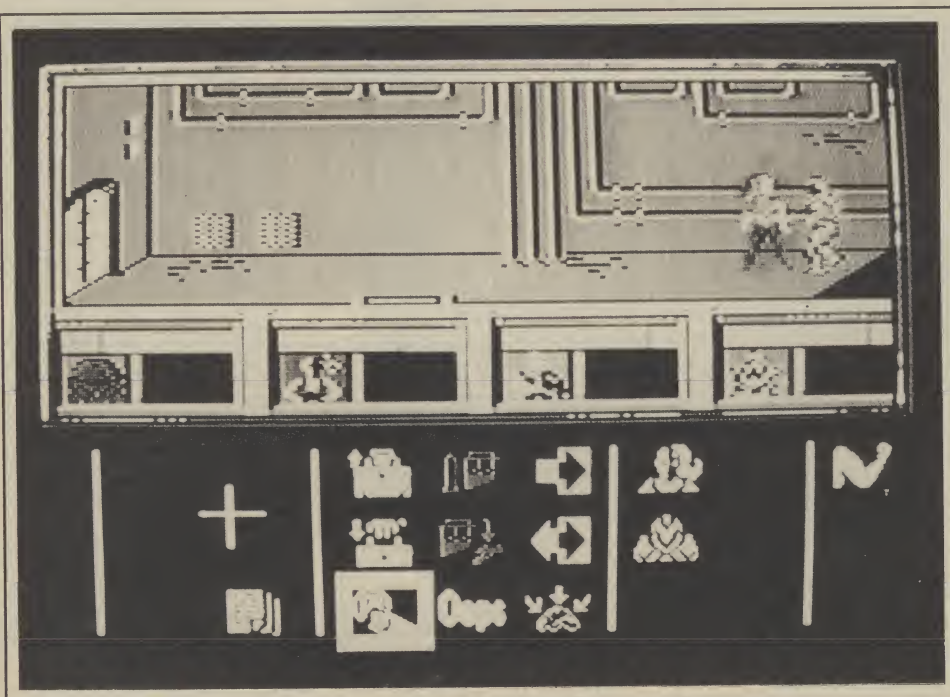
Enigmaforce — "A quick description would be Shadowfire with animation".

you must discover by trial and error). You can also take over direct joystick control of a character allowing you to engage in gun-battles with enemy forces in ordinary shoot-em-up style if you so wish, although this is inadvisable until you've located some decent ammunition.

Another excellent touch is the ability to run up a sequence of commands for a single character — you don't have to wait for each one to be executed first. This means you can issue instructions to one character, leave him to get on with it and switch to control of another, for as in *Shadowfire* you are the leader of our other beings.

The scenario incidentally is that General Zoff who you captured if you completed *Shadowfire*, has escaped during a crash landing on a planet where a war is raging between insectoids and reptiloids. Your aim is first to recruit the insectoids to your cause, then to destroy Zoff and finally to locate another space-craft, the action taking place in a large network of hi-tech underground rooms.

The animation itself is not the greatest, but it serves its purpose of showing you what's go-



Left: Two members of the Enigmatteam explore the underground complex.



(a) three members of the team await instructions; (b) Strength icon; (c) Bar chart strength indicator; (d) Icon selector; (e) Icon window scrolls left and right.

Below: Status report on Enigmatem



ing on. At least the action is fast. Oh, and there's another great piece of music to accompany the action if you so wish.

Be warned that the game takes some getting used to. Icons, contrary to theory, are actually much harder to get used to than written commands. But because this is an adventure, working out what each command does is all part of the fun. Once you've got the hang of it, it's almost impossible to stop playing.

Chris Anderson

Graphics	★★★★
Sound	★★★★
Toughness	★★★★★
Staying Power	★★★★★
Value	★★★★★

Screen
Star

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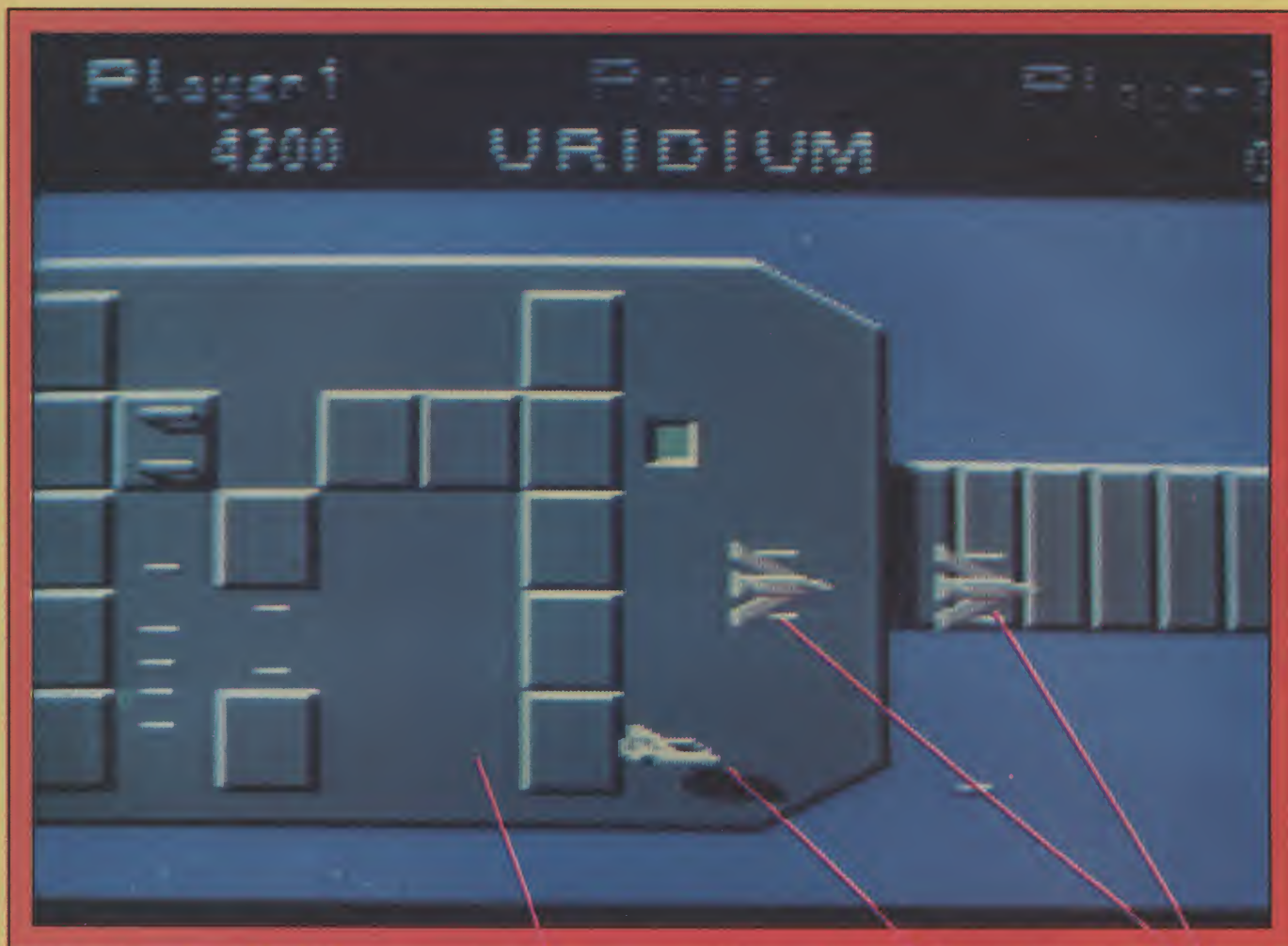
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URIDIUM

Uridium is the first of fifteen attacking Super Dreadnoughts. Dreadnoughts are twenty screens long.

Your Manta Class Space Fighter.

Blast Uridium's Protection Fighters to earn bonus points.

Paradroid fans will be queuing up at their local games shops at the end of Feb to get their hands on Uridium the sequel to Hewson's hit game. Andrew Hewson popped into the Commodore User offices before Christmas to bring us this sneak colour screen-shot.

It's set in deep space. Fifteen huge enemy fortresses (Dreadnoughts to give them their proper names) float ominously towards your home planet. The first of these, Uridium, is in your sector and you are ordered to intercept and destroy it. No easy task this as you have to down the ship's Protection Fighters, and avoid the mines before you get to straffe the ship itself.

The ship is truly huge — to give you an idea of its size in comparison with your ship, the screen-shot above shows just one 20th of the length of Uridium. In other words you must scroll through 20 screens to fly the length of this mega fortress.

Once you've penetrated the Fortress's defences you have to plant mines to finish it off completely. We haven't yet seen the explosion when Uridium goes up but Andrew Hewson (not your standard, pushy, everything we do is amazing type) did say that it was "breath-taking".

It is actually a nuclear explosion. You have to set mines and then make good your escape before the mega-bang is triggered.

But don't think that's the end of it. Uridium is only the first of fifteen Space Fortresses — each named after a metal, and each one tougher than the previous.

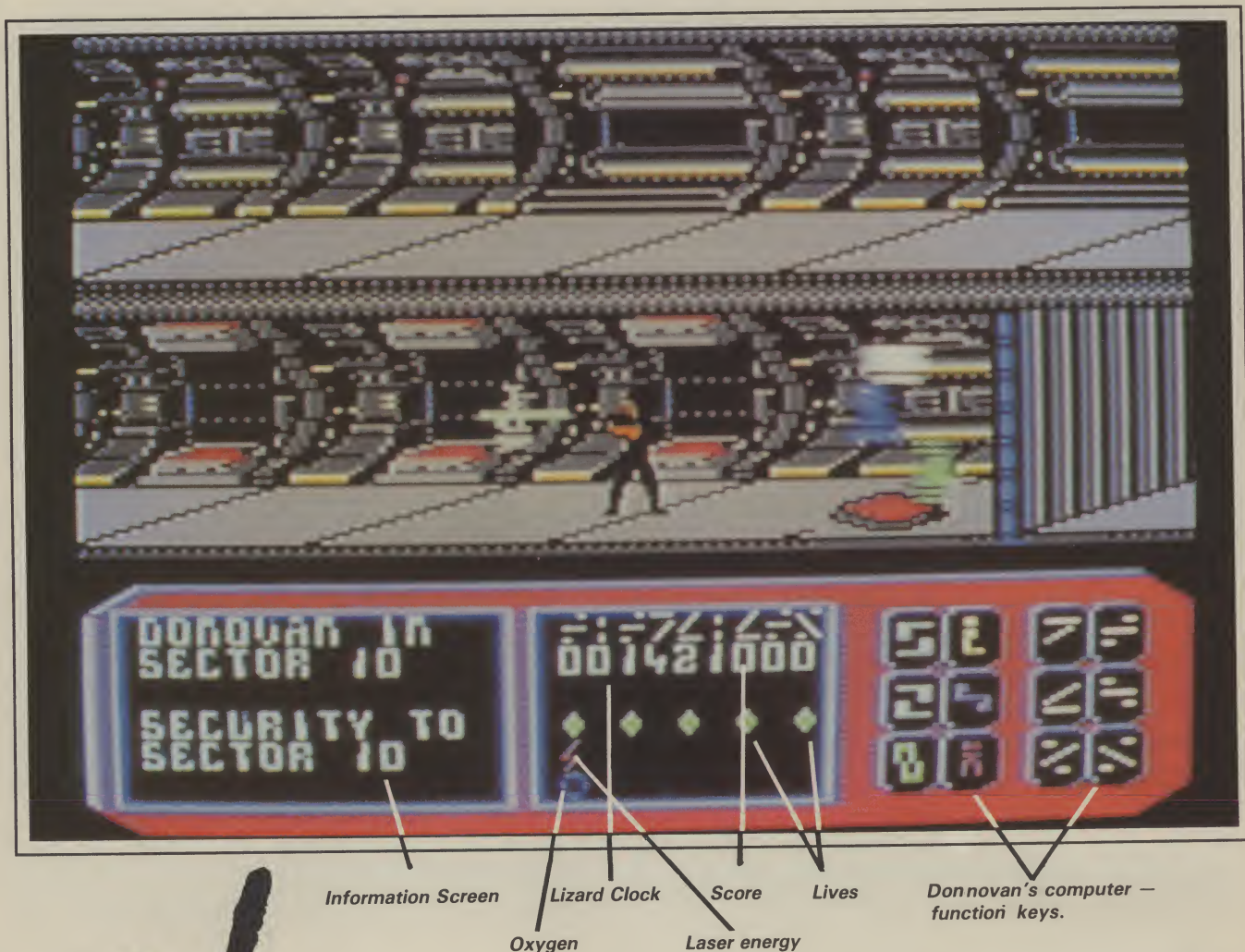
You pilot a Manta Class Space Fighter. A small, fast, nifty little fighter armed with particularly powerful lasers. To fly it you push forward on the joystick — this will make it accelerate. When the joystick is centred the Manta will slow down, cruise, and then turn and cruise slowly in the opposite direction.

Ammo is unlimited so once you get a Protection Fighter or the Dreadnought itself in view let fly with all you've got.

The graphics invite obvious comparisons with Paradroid. Programmer Andrew Braybrook has used the same shading and metallic effects to create a subtle suggestion of depth. This has been further emphasized by the use of shadows on Uridium created by your ship as it turns, dips and accelerates.

Andrew Hewson believes it's going to take a "long time" before anyone manages to destroy all fifteen Space Fortresses. If and when that point is reached, say, perhaps by a member of the **G Force**, then you get three or four of the tougher crafts coming at you again. This means that you can continue to up your high score. Getting more proficient at downing the Protection Fighters in an ever shorter period of time earning even higher bonuses.

The game is due out at the end of February but there's a full review in next month's **Commodore User**.



The Lizards captured the imagination of a huge audience when 'V' was first shown on your TV screens — over three consecutive nights — during the Olympic games.

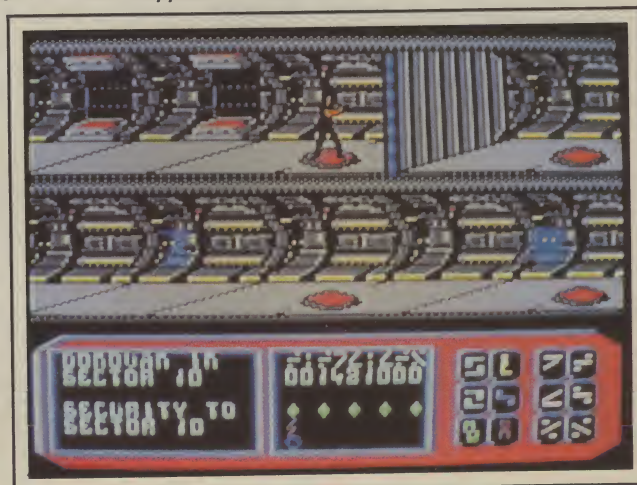
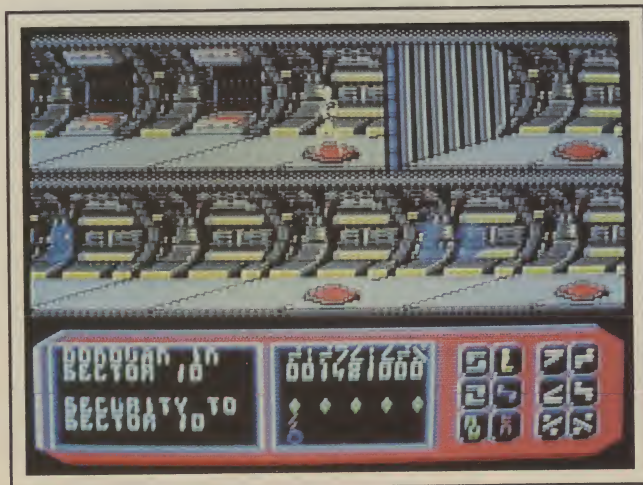
The tale of Lizard-like aliens, disguised as humans with near-perfect rubber masks, secretly syphoning off Earth's water whilst pretending to be our

friends proved compulsive viewing.

The 'one off' production proved so successful that 'V' was turned into a series. Great news for hard core 'V' fans like me. More good news was to follow — DC Comics announced a 'V' series and Ocean software a 'V' game for the 64. So what happens in the game?

You play the part of Resistance

Below: Donovan uses the teleporter to disappear . . . and reappear at a new location.



leader Mike Donovan, whose mission is to destroy the Visitor's Mother Ship. The ship has five major locations: the Central Computer, Nuclear Reactor, Air Purification Plant, Communications Centre, and Water Inlet.

Game designers Grant Harrison and Tony Knight have added their own original touch to the 'V' story. In the game, Mike Donovan can teleport from location to location by standing on certain metal plates on the Mother ship. The five major locations mentioned above are divided into a total playing area of 128 screens — 16 wide by 8 down.

Donnovan carries with him a mini computer which he uses to hack into the Visitors' Communications com-

puter. The messages are transmitted in the Lizards' own language. So Mike Donovan has to translate them to make use of the information.

The game begins in an Airlock near the Docking Bay. The screen is divided into two main sections. The top two thirds is the interior of the Mothership, and the bottom half the various information — including Donovan's computer with its six main function keys.

The best way of blasting the Mothership is to lay explosives in the Central Computer. This disrupts the functioning of all systems including the nuclear reactor — which in turn leads to one very big bang.

It's not yet certain whether Lydia and Diana, the arch V villainesses, will star

in the game but with or without them you're in for a tough challenge.

The corridors of the Mothership are patrolled by Security Droids as well as Lizard guards. But don't worry Donovan is armed with a powerful laser to fight them off.

Tony Knight expects comparisons to be made between V and Impossible Mission. "Donnovan's running motion is similar to that game" he told CU.

It will be available on cassette at £9.95. 'V' is expected in the shops by "early January" — so you should be able to buy it by the time you read this. But you can also get one completely free by entering our fun 'V' Quiz. We have no less than 30 copies to give away.



Quiz



Test your knowledge of 'V' and win one of 30 free copies of the game that we have to give away.

As an extra special first prize we have a selection of the excellent DC 'V' comics for the first correct entry to reach our office.

1. Name the two female Lizards above?
2. Who was the Star Child?
3. What was the name of the Visitor General who turned pacifist and helped the resistance?
4. What was the resistance fighters' radio network called?
5. The Visitors were finally defeated by (a) a polluted water supply; (b) a massive explosion, or (c) deadly red dust?

Send your answers on a separate sheet of paper to:

V Competition, Commodore User, 30-32 Farringdon Lane, London EC1R 3AU. Entries should reach us not later than February 15th.



128

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Cauldron — witches, spells and broomsticks.

Now Games 2 Commodore 64 Virgin Software Price: £8.95/cass

Compilation tapes can be extremely frustrating affairs. If you already own half the games on them you're bound to feel torn about buying them a second time for the sake of the rest of the titles on there. But there's no doubt they represent good value for someone who's just bought a 64 and wants to build up a software library the legal way.

Now Games 2 offers five games originally released in the

spring of 1985. Three are winners, two also-rans.

First off is Elite Systems' *Airwolf*, one of the winners. Based on the TV series, it's a cross between fast-moving shoot-em-up and brain-twisting arcade-adventure. You have control over the Airwolf helicopter and have to pick your way through a hazardous underground labyrinth in search of five scientists who need rescuing.

The game requires an extremely deft touch on the joystick as the helicopter's movement is extremely responsive, and many of the gaps you have to manoeuvre through are pretty tiny. The puzzle element consists largely in working out what order to do

certain tasks — for example, shooting out a switch can open a new section of the game. Be warned there are plenty of surprises.

The same can't be said of A&F's *Chuckie Egg 2*. The original *Chuckie Egg* was an addictive, if simple, platform game. The follow up is an arcade-adventure but of very primitive standard — Spectrumsque graphics and unoriginal puzzle-solving.

Fortunately there are two far better arcade-adventures on the tape: *Cauldron* from Palace Software and *Tir Na Nog* from Gargoyle. Both have very classy graphics — *Cauldron* has a beautifully detailed scrolling background, while *Tir Na Nog* features the superbly animated Celtic character Cuchulainn.

Of the two *Tir Na Nog* has a much stronger puzzle element, but the action in *Cauldron* is much faster and more exciting. The latter game stars a witch whose time is divided between flying around the earth on her broomstick, and leaping from platform to platform in one of four underground caverns.

The other football games on the tape aren't really worth talking about but never mind, the three good titles make this compilation a bargain for latecomers. The ratings below refer to them.

Chris Anderson

Graphics	★★★★
Sound	★★★
Toughness	★★★★★
Staying Power	★★★★★
Value	★★★★★

Tir Na Nog — Celtic myths make great adventures.



Doctor Who And the Mines of Terror Commodore 64/128 Micropower Price: £14.95/cass

A lot of money has been spent on the marketing of this game. It comes in a huge box, about four times the size required to hold its contents those being a cassette, loading instructions for four different computers in six different languages, game instructions, more game instructions, a map, and a piece of coloured card in a plastic holder. Now you know why it's so dear.

After that lot, the game itself turns out to be something of a disappointment. It's basically a straightforward platform game with you cast in the role of The Doctor. The Mines of Terror provide the scenario, for it is here that the Rijans, under control of The Master, are digging for the

rare mineral Heatonite. The Master wants the Heatonite so that he can build a TIRU (Time Instant Reply Unit) incorporating The Doctor's brain and take over the universe forever.

You, as The Doctor, must thwart The Master's plans by stealing them. This involves wandering around The Mines collecting things like picks, air masks, dynamite, etc, and avoiding death by numerous unpleasant methods.

To aid you on your mission you have Splinx, who looks like a cat, but isn't. Splinx can be programmed to do things like follow you, or go to certain tricky locations and retrieve objects. This would have been very useful indeed, but my Splinx steadfastly refused to carry out my instructions.

Doctor Who still leaves a lot to be desired. The graphics are mostly dull and uninteresting for one thing. And when you get killed, the game just freezes for an interminable fifteen seconds or so while you are informed what

caused your demise.

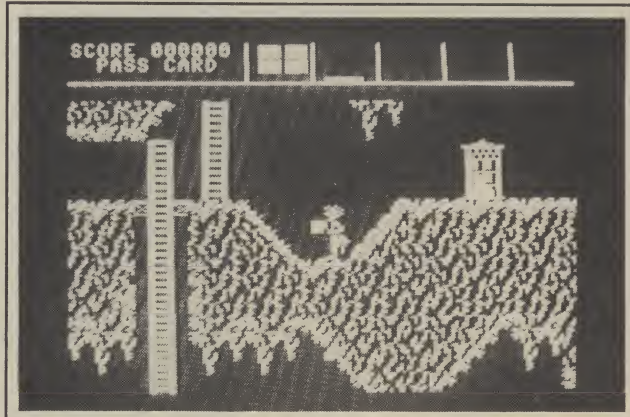
Doctor Who is obviously intended to be a more of a brain-strain challenge than arcade action, but I don't see that as an excuse for poor presentation. You'd have thought with all the mileage Dr Who has had (how many people owe at least one childhood nightmare to the pro-

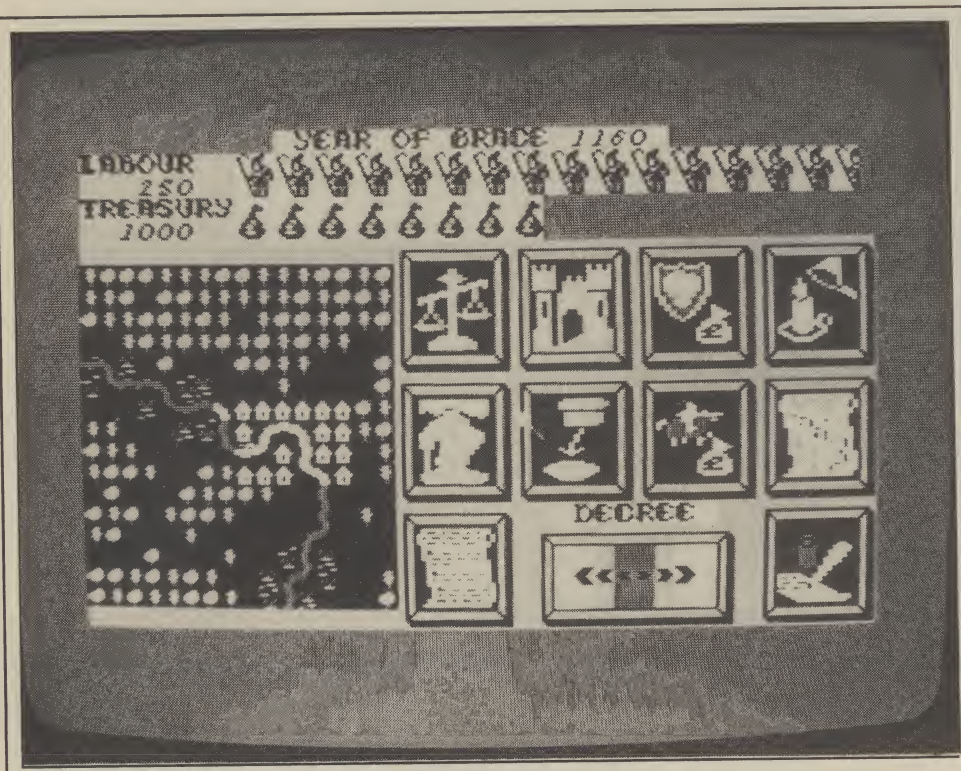
gramme?) it wouldn't be too hard to produce a good game, but clearly inspiration was lacking.

Kén McMahon

Graphics	★★
Sound	★★
Toughness	★★★
Staying Power	★★★★★
Value	★★★

Dr Who in those terrible mines.





"some of the icons and their use is slightly over the top".

The Evil Crown Commodore 64/128 Mind Games Price: £9.99/cass

"Icon-driven", "animated", "simulation game". Uh huh. Sound familiar? It sounds as though the programmers (or at least the marketing people) have just discovered icons and the animation possibilities of the C64. Anyway, to business: "The Evil Crown", it says here. "Feudal England, 1200 AD." The game is a simulation of what it was like to be a Baron back in the good old bad old days. Starve the peasants, win a few tournaments, overthrow the King. The screen shows a small map of your barony with villages displayed quite neatly (little house-shaped icons — we'll come back to them in a minute). Most of the screen however, is taken up by boxes, each representing some part of the economy of running a barony; taxes, tolls, protection money to the King and other necessary expenses.

The player starts off with 250 peasants and 500 pieces of gold. The object of the game is, by careful expenditure of that money and placement of the peasants to increase your holdings to the point where you are strong enough to challenge

the King. A joystick moves an arrow onto one of the expenditure boxes, a sliding scale allows you to adjust how much you spend. Once all of that is out of the way, you can move on to the main part of the game. . . .

Except that this is the main part of the game. What comes next is an "animated tournament", where you try to knock off as many opponents as you can (usually one or less), and the Battle stage, where other Barons

try to invade your territory or your peasants revolt against you and you have to defend your territory. This too is "animated"; pictorial representations of the two opposing sides meet in the centre of the screen, struggle a little, and then one retreats. Exciting stuff! he said, turning down the sound on the monitor. The only way the player can influence the course of the battle is by deciding how much to pay his militia or how many mercenaries

he can afford to hire.

Assuming these stages are passed successfully, the Baron then reaps his Harvest — an increase or decrease in peasants and money. Peasants die due to starvation, attack by wild animals and war. Barring this, they increase by, well. . . . Now if they could animate that. . . .

Eventually, if the Baron is successful, he will be allowed to challenge the King. Failure means death, of course. And then. . . Play again?

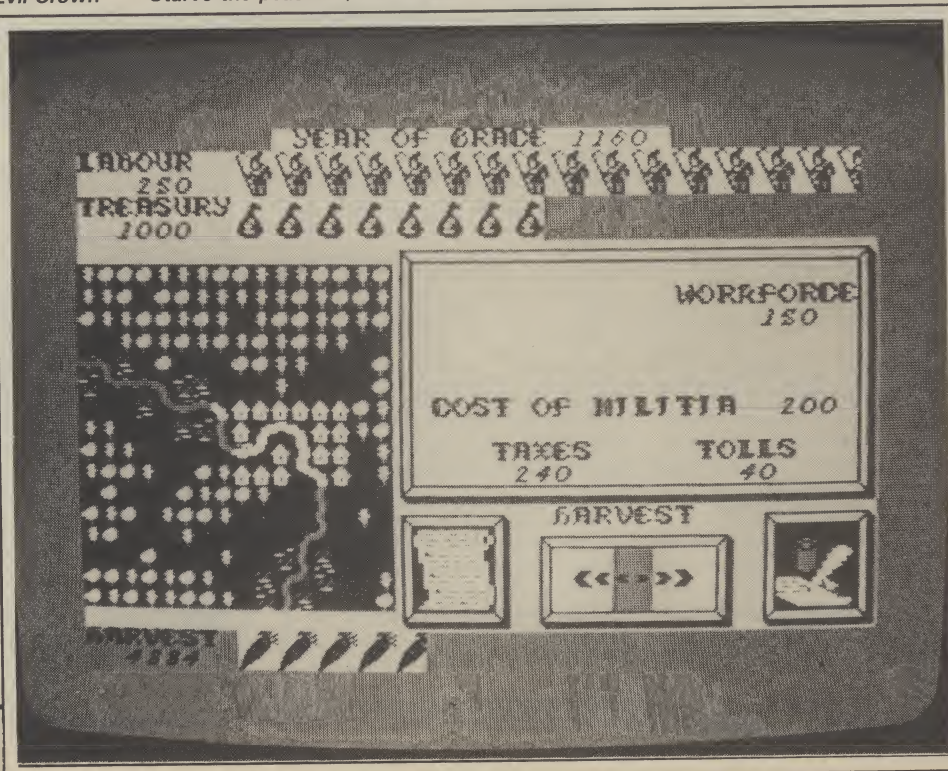
In terms of graphics, the display is clear, informative and uncluttered. But some of the icons and their use is slightly over the top. For instance, those little houses we mentioned earlier. They represent villages, and you gain or lose a certain number at the start of each turn. But since the gains or losses can reach 50 or more, you would think there was an easier way of placing them on the map than picking up each one with the arrow, placing it on the map, going back for the next one, picking it up with the arrow, placing it on the map, going back for the next one, picking it up with — well, you get the idea.

We never knew that a single bear could account for upwards of a third of the population of a village in a single year, but you've got to learn something from a game!

Simon Farrell & Jon Sutherland

Graphics	★★★★★
Sound	★★
Toughness	★★
Staying Power	★★
Value	★★★★

Evil Crown — "Starve the peasants, win a few tournaments, overthrow the King."



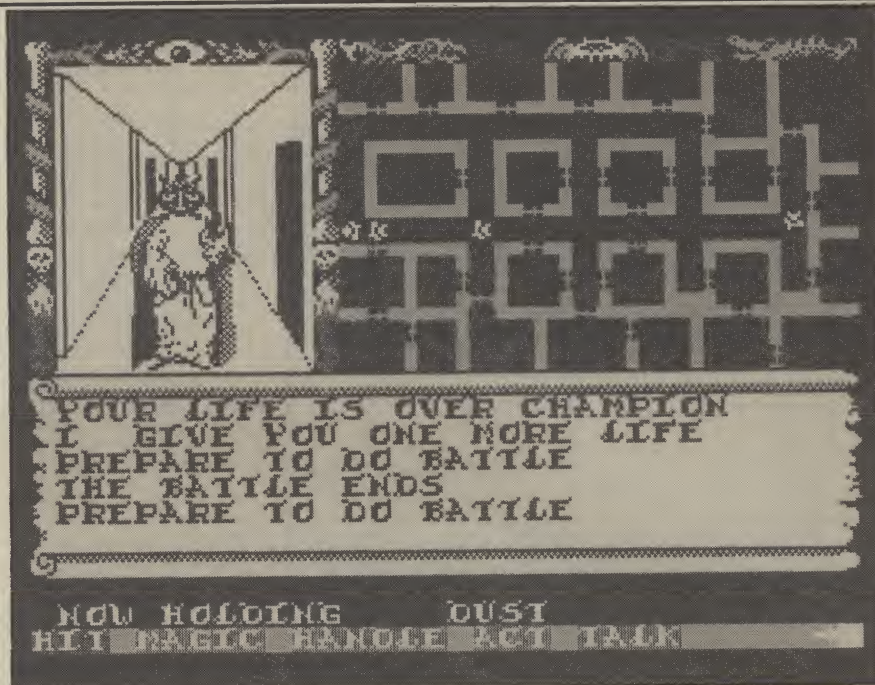
PSS boss, Gary Mayes, is uncharacteristically cool about the launch date of the long awaited *Swords and Sorcery*.

You would expect him to be getting itchy fingers by now — given that the game has been under development for the last eighteen months.

Most other software businessmen would turn all shades of green if they were reminded that all of that expensive programming development time had not yet been turned into hard cash.

When's it going to be ready, Gary, I ask hopefully? A nonchalant shrug of the shoulders, a look of complete indifference to a question that does not seem important and the reply "March, probably, . . . it's coming along".

PSS have a reputation for taking their time with development, but in the case of *Swords and Sorcery* there is a very good reason. Simply, this is their biggest launch to date. Having now established themselves as the UK's



Swords and Sorcery

leading war games manufacturers, with games like *Battle of Britain* and *Theatre Europe*, *Swords* is their bid for the larger, more lucrative, arcade adventure market.

The plot is spelt out in rhyme as follows:

WHEN DARK CABALLUS HIS
COUNCILS LENDS US
LET NOT THE RED CLUPEA
HARANGUE US
TURN US FROM WHAT SEEMS
TREMENDOUS AND

THUS TO ZOBS GREAT TREASURE
SEND US.

The screen is reminiscent of the old Beyond game — *Psytron*, with a 3D action panel, a flat maze panel, and a horizontal panel at the bottom for the text and other information.

The screen shot above was taken from the Spectrum version of the game which has been on sale now for several weeks.

PSS are calling this technique the MIDAS system — but don't ask me why.

The game allows you to develop your own character. You can choose to specialise in magic, sword play, or whatever else takes your fancy.

Swords and Sorcery is designed never to become obsolete — with a number of expansion modules planned.

Swords and Sorcery certainly looks like it is going to be a mammoth challenge of adventure, strategy, and fighting. For a full G Force review when the game is completely finished keep watching this space.

The Edge are planning a world wide launch for the 64 version of *Fairlight* — a smash hit on the Spectrum earlier in the year.

cade adventure blurb, but believe me, *Fairlight* really is something special.

You play the part of the cloaked adventurer, exploring the hundred plus rooms, of the 3D-style castle.

Fairlight

A deal with a top American software label is under negotiation and an Amiga version of the game is planned for millionaire gamers. The Edge's previous game this year — *Wizardry* — out Ultimated Ultimate's *Pendragon* series with better graphics, and a tougher challenge.

Fairlight promises to be even better. Plot-wise it does not sound exceptional. A wizard is locked up in a castle and you have to find an ancient book to free him before something awful happens. Now just stop right there. Don't you dare turn that page. Yes, I know you've heard it all before, all that ar-

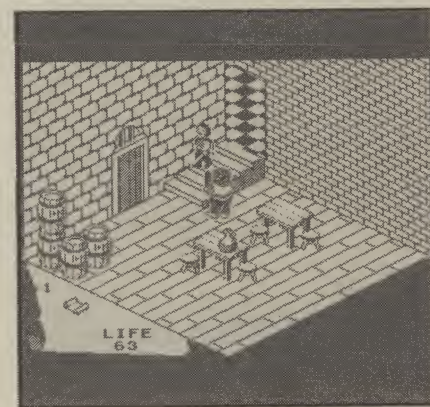
Graphics are incredibly detailed even if they are of the two colour variety.

Your short sword is used to fight off the orcs and other nasties that assail you on your quest.

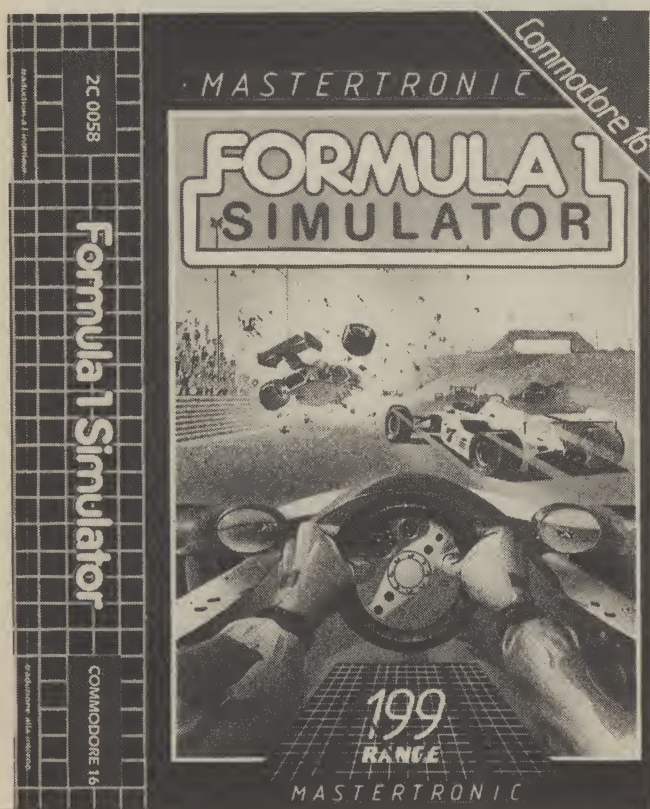
But there is much more to *Fairlight* than exploring rooms and killing nasty creatures.

The beautifully drawn objects in various rooms are intended for use. Boxes have to be placed on top of each other to enable you to reach items that are required, and chests can be opened and searched.

You can carry up to five items with



you at any time but this takes energy so you must keep this replenished. So far we have only played the Spectrum version of *Fairlight* — from which the above screen dump was taken. But rest assured as soon as the 64 version is ready (easily by the time you get to read this) we will be playing it to death to bring you an in-depth review of this classic game.



Formula 1 Simulator Commodore 16 Mastertronic Price: £1.99/cass

Hard on the tail of *Death Race 16* which we reviewed last month comes Formula 1 Simulator by Mastertronic.

There's a basic difference of approach in Mastertronic's effort. Instead of buildings whizzing past your eyeballs at 200 mph, formula one keeps the scenery on the horizon. The track is marked out by little white stakes against a grassy green backdrop. The bottom half of the screen shows your instrument panel if you could it that. In the centre is the steering wheel, this turns when you tweak the joystick or press the appropriate key, both options are included. Remaining time is shown on a countdown clock as is the time taken to complete the current lap. The bottom right-hand side of the screen shows your speed, gear, number of cars passed and of course your score.

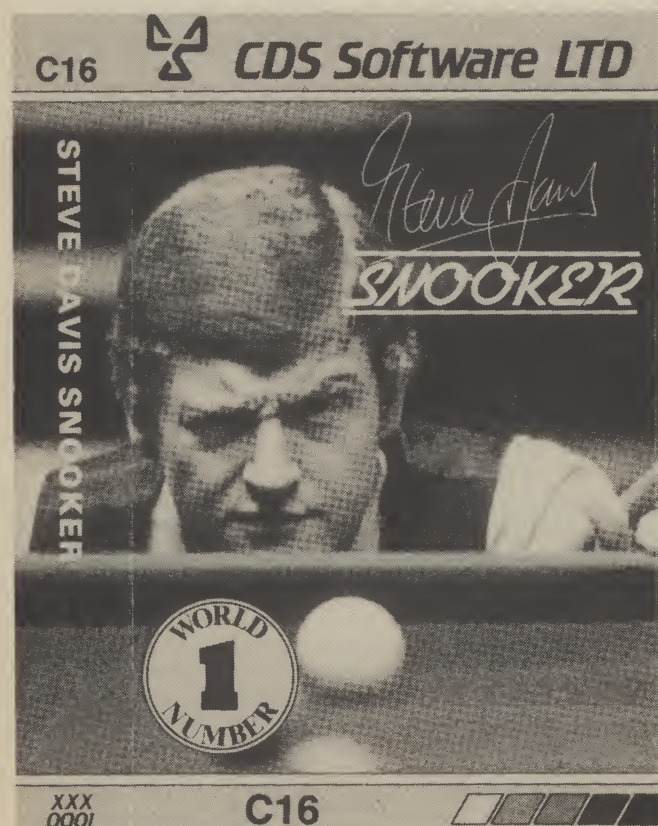
If I were to criticise something it would be the lack of challenge in the course. It doesn't exactly push you to the limits of your driving skills. The long straights which allow you to reach speeds

of 300-400 mph are terminated by either left or right-hand 45 degree bends. After a short while this becomes a bit predictable and therefore monotonous.

The other cars provide a tricky diversion. They don't go incredibly fast so the tendency is to race up behind them at breakneck speed. The only way to avoid a collision in these circumstances is to slam into low gear (there are only two). They can be passed quite easily, but it means losing a lot of time, especially if there are two or three in one spot. You are awarded bonus time on completion of each lap. To begin with, it takes longer to finish a lap than the time bonus you get for it. If this happens you will run out of time after two or three laps and points will be added to your score for any cars you passed. With a bit of practice it's possible to keep going for a lot longer.

Although Formula One is an easy game to master it has a continuity about it, you don't crash every five seconds. This makes it good fun, but it could have limited appeal.

Graphics	★★★★
Sound	★★★
Toughness	★★
Staying Power	★★
Value	★★★★



Steve Davis Snooker Commodore 16 CDS Software Price: £7.95/cass

Steve Davis Snooker was originally released on the Commodore 64 about six months ago. It was, and probably still is the best snooker game for the 64. Sadly, the only similarity between that and this C16 version is the picture of Steve on the inlay.

The first megadissappointment is that you can't play the computer. As playing yourself at snooker must rate as one of the most boring pastimes in the history of the world you'll have to find an opponent.

As anyone who has watched snooker on a black and white T.V. will tell you it's not always easy to follow what's going on. Because of the C16's colour limitations the same problem arises. The brown and pink are easily confused with the reds and I kept losing the cueball altogether. CRL have, at least, recognised the problem and have recorded two versions on the

tape, one with a green table and the other black. I found the green clearer, but it may depend on your T.V.

Apart from that you have a pretty faithful rendition of the game. Each player takes it in turn to cue up with the cursor. Spin can be put on the ball, but unlike the 64 version you can't decide on how much, you've either got it or you ain't. Finally, you have to decide whether to smack it one or go for a gentle pot using the power meter at the bottom of the screen. The scoring is updated automatically and foul strokes are penalised according to the rules.

If you're a dedicated aficionado then Steve Davis will no doubt appeal to you. But I think that CRL have been too ambitious this time. In the transition to the smaller machine all the best bits of the game have had to be dropped.

Ken McMahon

Graphics	★★
Sound	★★
Toughness	★★★★
Staying Power	★★
Value	★★★★★

Evesham Micros

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"Freeze Frame" is the product that '64 owners have been waiting for. At the flick of a switch "Freeze Frame" will take control of your computer and freeze the program in memory, allowing you to **SAVE it to tape or disc**. The uses are endless, but typical applications are...

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DISC TO TAPE: ANY memory resident disc program can be backed up onto tape. (Choice of normal or turbo save speed.)

DISC TO DISC: It is possible to make a self contained back up of disc based programs that will both **load at high speed** and **allow the rest of the disc to be used as normal**.

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"Freeze Frame" is a hardware "device" that plugs into the cartridge port of the '64. It does NOT dump the entire contents of memory, just the **working program**. Programs converted **run independently** of the hardware.

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WARNING: Don't be misled by other adverts, if you want to transfer turbo load programs to disc, software only utilities are **inadequate**. They suffer from a variety of drawbacks including poor success rate, awkward to use, greedy on disc space and overpricing.

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Incorporates Centronics printer software (user port) with **CBM graphics** capability. See "Commodore Connection" for suitable lead.

A RESET switch is fitted. (We have found this to be "unstoppable", it also preserves the tape buffer.)

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Requires access to two data recorders.

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This is the first copier of its kind to appear on the U.K. market. It is a **true nibbler** (byte for byte) copier that will copy **ALL**. It is a **true nibbler**. This includes DOS errors 20-29 inc. plus non standard errors like half tracks, extra tracks, DOS errors **automatically**. They are all treated as normal work. No knowledge is required at all. It just **"nibbles away"** and produces a perfect copy. Yet it only **takes eight minutes**. Has copied all discs tested (except itself). A class above anything else available.

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sophisticated machine code version), **Scratch/Unscratch**,

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This program is an **essential purchase** for the 1541 user.

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Customers with earlier versions may return them along with

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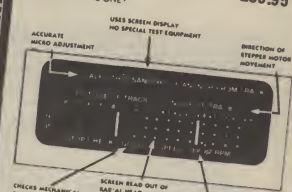
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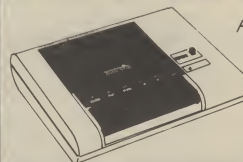
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Blade Runner Commodore 64/128 CRL Price: £8.95/cass

Now listen carefully because this is a bit complicated. *Blade Runner* is "A Video Game Interpretation of the Film Score by Vangelis", says the box blurb.

How do you make a game around a piece of music, I hear you ask. That must have been a question that CRL pondered, as well, for at least five seconds. Their solution is simple — YOU DON'T — you make a game about *Blade Runner* the film.

In case you haven't seen it, it's set in the 21st Century. An advanced breed of robots, the Replidroids, are used as slave labour in the colonisation of other planets. Not surprisingly these near-human droids get cheesed off with being slaves. So they set up the Robot Liberation Front and mutiny on and off-world colony.

The result: they are made illegal on Earth with orders from the government that they must be tracked down and destroyed.

This is where you come into the action, as the *Blade Runner*, a

space-age bounty hunter who earns his keep by hunting out and retiring Replidroids.

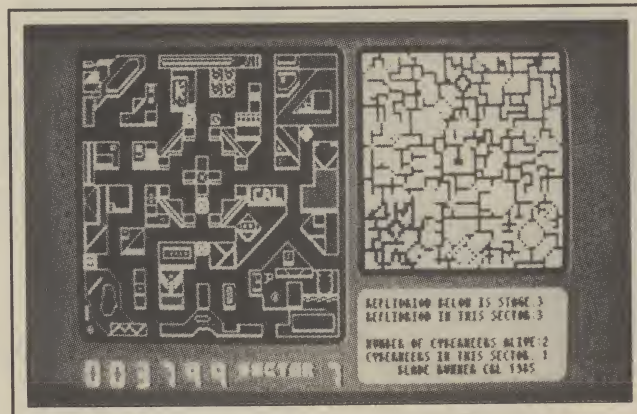
The game has two screens. The first shows two maps of the city: a large close up of one of the city's nine sectors, and a smaller, complete map. A grid shows the position of the close-up in relation to the other eight sectors.

This screen is used to track the Replidroids. Press the fire button and your craft takes off — though this is difficult to see as it is no more than a tiny dot in size.

The aim is to find a Replidroid — shown blinking on the city maps and land on top of it. The screen now changes to a street scene.

Your ship descends slowly to the pavement and out hops the *Blade Runner*. A bit disappointing has to be the first impression as you expect something like Harrison Ford — the original *Blade Runner*.

Anyway, once the action starts you soon forget about the inadequacies of the graphics. The chase is on as you track the Replidroid Defender-style on the scanner. Once you get him in your sights you let fly with your laser. More disappointment here I'm afraid — you can't see anything and there is no sound of



Close up of city streets. Main city map, with shaded sector showing the area of the close up.

gun shot either. Sure, the pedestrians fall to the ground as evidence of the laser strike — but a laser gun without graphics or sound, come on CRL we expect better than that.

It's a pity about the laser because the street chase part of *Blade Runner* is quite good fun. Not stunning, but I did want to get those Replidroids once I'd gotten into it.

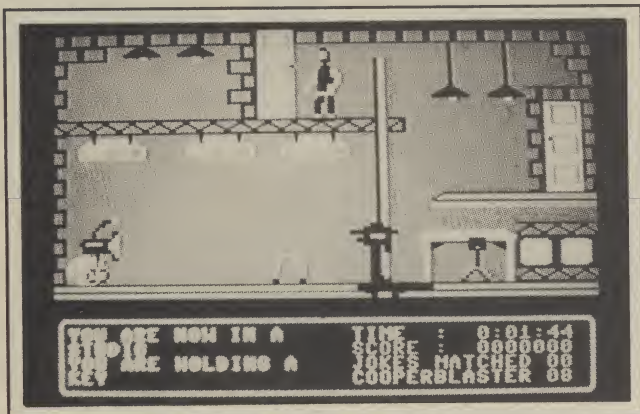
The music is excellent — at least CRL have done justice to Vangelis's sound track even if the game itself is disappointing

when you consider the vast potential of a film like *Blade Runner*.

Blade Runner is another of those games, like *Friday 13th*, that wouldn't be much cop at all without the title. It would be OK at £1.99 but not enough depth or lasting value for £8.95

Eugene Lacey

Graphics	★★
Sound	★★★★
Toughness	★★
Staying Power	★
Value	★



Russ Abbot attempts to escape from a rival comedy act.

Basildon Bond Commodore 64/128 Probe Software Price: £12.95/disk £9.95/cass

This game forces me to come straight to the point. The similarities between *Basildon Bond* and *Impossible Mission* cannot be ignored for a moment

when you come to play this. It is a clone trading on the success of the original. That said it's made a reasonable attempt at aping its mentor.

The idea behind the game is to rescue Russ Abbot from the clutches of a rival comedy act. This may, bearing in mind the quality of Russ's 'Atmosphere' single be a major stumbling point, but I overcame my prejudices and made an attempt to rescue him.

The action is centred on a TV studios where Russ is secreted in

some dank dressing room. As Bond you have to search the place, collect jokes and answers and find the secret room. The similarities may not sound overbearing but as soon as you see the style of the game you'll see my point. Cameras patrol back and forth like the droids in the Epyx original and the jokes and answers are hidden in various items of furniture and equipment that are littered around. Even the agent's echoing footsteps are there.

Missing though from this is the lift that took you up and down the professor's complex. Another game takes over for inspiration here. That old classic on the Amstrad (the 64 version was naff) *Sorcery*. Bond goes from room to room carrying various useful items complete with the creaking of doors.

All this is not as off-putting as it probably sounds. I can't think of many better games to take inspiration from. The problem really lies in the lack of atmosphere (ha ha) that this version has in comparison to its idols. Added to this Probe have substituted some of the gameplay for pure niggly

toughness. To get going in the game you have to find a diskette to boot the computer up with. Not easy I can tell you. Then whenever you find a joke or answer a face like a balloon floats down and nicks it off you. Sometimes there's nowhere to hide from it. Furthermore you have to find the right object to search an item of furniture with, but each time you start a new game the items and the objects they apply to change. If you think of the possibilities involved with forty rooms and even more objects, then you'll start to realise this is no picnic.

When all this is said and done I think you might want to give it a go anyway. It's certainly a challenge. You won't get the class and style of the Epyx original, but you will get a well executed game of the same type. I'd rather have that than a load of drivel.

Mike Pattenden

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Old programs for new

After you have deleted a Basic program either by pressing a reset button or by typing NEW, the program is not actually removed from the machine's memory, it is just made inaccessible to the Basic interpreter.

Now it can often happen that you will want to make the program accessible again, especially if you pressed reset. The next program does just that — it reverses the effect of NEW. Not surprisingly, this facility is called OLD on some other machines.

The program creates a single Basic line with an OLD program embedded in a REM statement. Provided this line appears at the start of all your programs, you can recover them if you wish by typing **SYS 2055. Line 1** in the program below *must* be a REM, one quote, 31 spaces, and a closing quote. This line must not contain any extra spaces anywhere.

What you do is to enter the whole listing

and run it. If you have made no errors then the program will copy the OLD code over the REM statement spaces and then delete all the program except **line 1**. This can then be saved for use later; you can add it to any program by LISTing it, loading the other program putting the cursor on the LISTed line 1, then pressing the return key. To work, this one line must always be included as the first line in a program.

```
1 REM"Thirty one spaces here SEE TEXT"
10 FOR C=2055 TO 2085 : READ A
20 POKE C,A : NEXT A
30 POKE 2088,0 : POKE 2089,0
40 DATA 169,8,160,1,145,43
50 DATA 32,51,165,24,138,105
60 DATA 2,133,45,133,47,133
70 DATA 49,165,35,109,157,161
80 DATA 133,46,133,48,133,50,96
```

The OLD program listing.



Freeze a listing

It always annoys me that there is no facility on the 64 to temporarily *freeze* the program scroll while it is being LISTed to the screen. This means that you have to try to see what is going on while the listing glides gracefully upwards before your very eyes.

Well, not any more. The 64 has a small unused block of memory between locations 679 and 767 just right for small machine-code routines. There is also a vector at address 774 which is used when Basic LISTs a program, and a flag at address 653 to detect when the SHIFT, CTRL or the Commodore keys are pressed.

By combining all these wonderful pieces of information, it didn't take long to produce a routine to perform the required function.

To add the LIST freeze facility to your 64, you just load and run this small listing and the facility will be installed automatically.

```
10 FOR C=679 TO 686 : READ A
20 POKE C,A : NEXT C
30 POKE 687,PEEK(774) : POKE 774,167
40 POKE 688,PEEK(775) : POKE 775,2
50 DATA 72,173,141,2
60 DATA 208,251,104,76
```

Freeze a listing program.

Loony tunes

How often have you written a sound program and wished that there was some way to reduce the quantity of data that has to be typed into the 64 to produce reasonable tunes?

Well, now there is a way! The 64 has a musical range of eight octaves, and normally each note needs to be specified as two numbers: two data values in a DATA statement. However, eight octaves is only 96 notes altogether and if some way could be found of numbering these notes from 1 to 96, then each note could be specified as one number, which would halve the amount of data required for a tune. Clever, eh?

The following program contains equations in **lines 70** and **80** that can convert a number in the range 1 to 96 into the two numbers that are needed to produce the right note from the table following that. The program also contains a small amount of DATA just to give you an example of its use.

```
10 S=54272 : POKE S+24,15
20 POKE S+5,0 : POKE S+5,240
30 C1=16.3516 : C2=0.06097
40 READ Z : POKE S+4,32
50 IF Z=-2 THEN RESTORE : GOTO 10
60 READ D : IF Z=-1 THEN 110
70 N=INT(C1*2↑((Z-1)/12)/C2+0.5)
80 NH=INT(N/256) : NL=N-NH*256
90 POKE S,NL : POKE S+1,NH
100 POKE S+4,33
110 FOR T=1 TO D : NEXT T : GOTO 40
```

```
200 DATA 56,80,58,60,59,60
210 DATA 61,60,63,160,61,60
220 DATA 59,60,58,160,59,60
230 DATA 61,60,59,60,58,60
240 DATA 56,160,-1,1000,-2
```

NOTE OCTAVE	NOTE															
	C	C#	D	D#	E	F	F#	G	G#	A	A#	B	Bb	B	B	B
1	1	2	3	4	5	6	7	8	9	10	11	12				
2	13	14	15	16	17	18	19	20	21	22	23	24				
3	25	26	27	28	29	30	31	32	33	34	35	36				
4	37	38	39	40	41	42	43	44	45	46	47	48				
5	49	50	51	52	53	54	55	56	57	58	59	60				
6	61	62	63	64	65	66	67	68	69	70	71	72				
7	73	74	75	76	77	78	79	80	81	82	83	84				
8	85	86	87	88	89	90	91	92	93	94	95	96				

The new DATA values for each note.

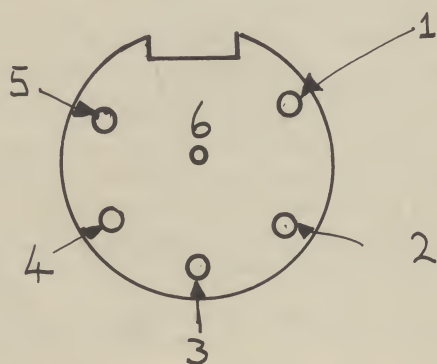
No need to switch off

Every 64 user eventually experiences a program crash. What this usually means is that you have made some simple typing error while entering your program and that a POKE has occurred placing a duff value into a sensitive spot. Very often this error can be so nasty that all your efforts to regain control of the beast fail, and you have to switch off, thus losing your program altogether.

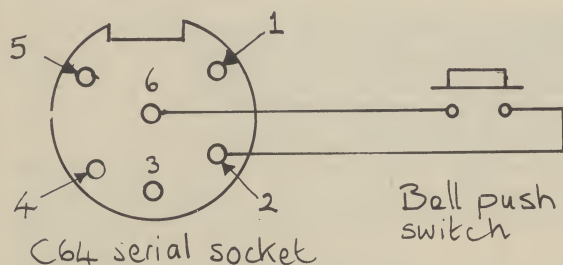
Having to switch off doesn't give you any chance at all to recover your program, but there is another way to regain control that does give you a chance — fit a reset switch.

For those of you with little or no hardware experience, this can sound quite complex, but it is really very simple.

On the back of the 64 (or disk drive, if fitted) there is a six-pin DIN socket that is used to connect serial input/output devices (like a printer or disk drive). Looking at the 64 from the back, the socket looks like this:



with the pins numbered as shown on the diagram from 1 to 6. Two of the pins on this socket carry signals that can be used to reset the 64 to its power-up state without turning off the power, thus retaining your valuable program in memory. The two pins concerned are **pins 2 and 6** and all you have to do to reset the 64 is to connect these two pins together for a moment only, using something like a front door bell push switch as follows:



Major Restoration

The next listing is another utility which has many uses. On the 64, the RESTORE keyword resets the DATA pointer back to the first DATA statement in a program. It would be much more useful if the RESTORE statement had allowed a line number to be specified so that you could choose which DATA statement to RESTORE to.

Sadly, it doesn't, but the following listing does the next best thing. It provides you with a SYS call that will allow you to perform a RESTORE function and specify a line number to RESTORE to.

To use this facility, you must add the following lines to the front of your program so that they are executed when you RUN it.

After these lines have been executed, you can then use lines of the form:

SYS 49152,LINEND

where LINEND can be any line number to RESTORE to. In fact, LINEND need not be just a number, it can be any numeric expression like $L*6$ or $A+B$ etc.

Even though the program as given uses **lines 10 to 90**, it can safely be re-numbered to sit anywhere in your main program. Also, the machine-code sits at **location 49152** in memory. This can also be changed if you need this area of memory for your own purposes. To do this, you just change the value **49152** in **line 20** to the new address you want to use and make sure that you use the same new address in the SYS calls instead of the current value.

```
10 FOR C=0 TO 40 : READ A
20 POKE 49152+C,A : NEXT C
30 DATA 32,121,0,32,253,174
40 DATA 32,138,173,32,191,177
50 DATA 166,100,164,101,132,63
60 DATA 132,20,134,64,134,21
70 DATA 32,19,166,165,95,56
80 DATA 233,1,133,65,165,96
90 DATA 233,0,229,66,96
```

Restore to a line number program.

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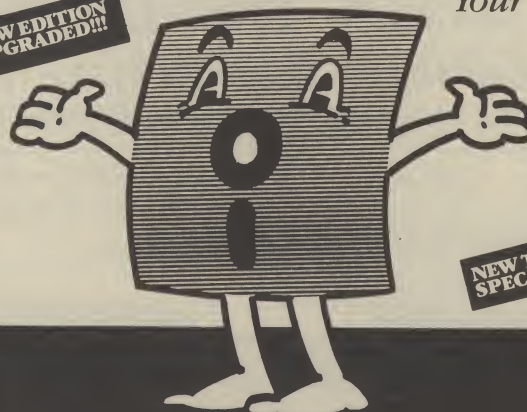
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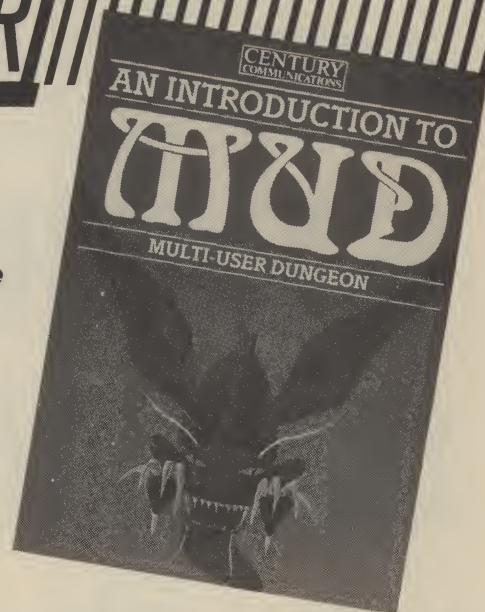
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HAPPY HACKER

Introducing our new Happy Hacker. From this month onwards, Geoff Wheelwright plugs in the HH modem to keep you up to date on what's going on at Compunet, Micronet and the various other inhabitable corners of the Commodore 64 communications world.

Geoff can be contacted on his Micronet mailbox number 013280101 or via his Compunet account 'CBMUSER' or via his Telecom Gold mailbox: 83:JNL123. Phew, that's enough mailboxes. Geoff does spend the odd bit of time off-line so it may take him a day or so to reply.



● **64 RULES ON-LINE (Well, almost):** According to Micronet's seemingly endless statistics department, headed by the enthusiastic Peter Probert, 64 users now form the fifth biggest group on Micronet (and those statistics don't even take into account the number who might be using non-Micronet modems). Does this warrant a big cheer? Not really.

● **MUD-SLINGING ON MICRONET:** The 'Net has revived Starnet, its multi-user rival to Compunet's MUD (Multi-User Dungeon) game in the wake of what it calls 'teething troubles' with MUD.

Up to 500 people can play Starnet at once (and British Telecom would be more than happy for you to do so) and Micronet promises the game is now a lot simpler than it was at launch two years ago — although no less challenging.

Starnet is essentially a game of computer-moderated space war in which you play the part of a 'star captain' and must challenge, form alliances and attack fellow gamers. You can find all this intergalactic carnage on page *8000303£.

● **GALLERY GOES DOWN:** Micronet has announced its first price hike on the Gallery exhibition area. It now costs you 99p per frame for up to a four-month period, with each edit charged at 10p. Existing exhibitors wanting to rebook can have their old pages transferred into the new Gallery area for a block charge of 99p. For details, contact the Net.

● **COMPUNET CORNER:** Enough of these Micronet missives, what of the Commodore-supported Compunet service — which everybody with real-live Commodore modems will know about (and there are anywhere from 2000 to 5000 of

you — depending on whose statistics you trust)?

Well, the first morsel of news I can offer is for users of the famous MUD (Multi-User Dungeon) game. Century Publications has just sent me a copy of *An Introduction to MUD* by Duncan Howard — the first full-length book to explore to ways and workings of playing MUD.

The £4.95 book include an introduction by the MUD-mad Richard Bartle and an extensive appendix showing the proceedings of a 'real' online MUD game. For those who really like to get their hands dirty with such adventures (groan . . .), this could be the definitive work.

● **MORE MUD:** Not only can you now buy a book about MUD, but you may be able to afford it by using all the money you'll no doubt save due to the newly-announced Compunet MUD price cuts. MUD now costs a flat £1.75 per hour and requires no monthly fee or registration fee.

● **YET MORE MUD:** for free: Moles at Essex University have revealed to HH a method of playing MUD whilst paying only for the phone call. You actually play on Essex's DEC 10 mainframes, between 2am and 7am on weekdays and 2am and 10am at weekends (getting sleep doesn't seem to bother the MUD mad).

First, you'll need TTY terminal emulation software, available from Y2 Computing on Compunet. You phone Essex Univ. on 01-831 6181 and wait for the prompt call to which your response is: A49600000. If you're lucky, [JAN 2 CMD] appears on-screen, to which you reply: HOST 1. You're then invited to log in so you type: LOG2653,2653. You're then asked the password (psst, it's GUESTS). Simple, eh? By the way, only a

maximum of twenty can play at any one time — better start brewing the coffee.

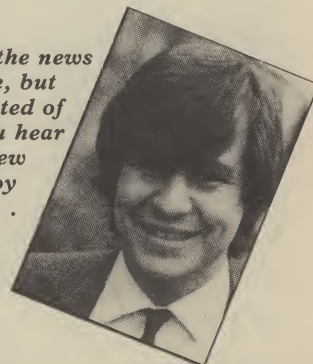
● **NATIONWIDE NODES:** Compunet tells me it now has more than 50 new access nodes, which allow local-call access to the service. Do you know what a node is?

The rate for the new access points is 60p per hour — in addition to regular BT charges — and Compunet claims this will mean a saving of up to £3 per hour for some people who had to make long-distance calls to get onto one of the 12 original nodes (which will remain free of extra charges).

● **SOFTWARE SELECTION** — The list of companies offering software on Compunet's (slow, but usually reliable) software downloading service now include Adventure International, Anirog, Audiogenic, Cascade, Durell Software, Interceptor, Melbourne House, Precision, Supersoft and The Edge/Softek. So why go out to your dealer on a cold and rainy day?

● **CHATTING ON PARTY-LINE:** here's an update on Compunet's challenge to Chatline on the 'Net. Pricing on the Party-line ensures that you don't constantly get recharged for using it. It costs £1 per hour to use — plus 10p for the link itself. The link stays in RAM while you're online so you don't have to pay every time you go in and out of the partyline during a Compunet session.

That's all the news for this issue, but keep me posted of anything you hear in the next few weeks. Happy Hacking . . .



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SECRET SERVICE



Codes and ciphers on your Commodore micro — Part two

by John Ransley

Remember last month's mirror coding, Caesar's Alphabet, diagram ciphers and goold old Polybius's square? There are plenty more classic technniques left to explore, and most of them are crying out to be dragged into the silicon century. One of these is a hybrid technique called the *grille cipher*, popular with the charming Machiavellis. Though goodness knows why they bothered — have you ever tried to read a handwritten Italian menu?

Grille Ciphers

The method involved writing an apparently inconsequential letter, but which contained several key words that formed the secret message to be conveyed. The positioning of these words was determined by the apertures in a second sheet that was laid over the paper carrying the message. The recipient would have an identical window or grille which, when similarly placed over the letter received, would reveal its real meaning.

So first of all, position one TV on top of another . . . no, seriously. Here's a routine that works on much the same principle. First enter these lines:

```
100 PRINT [CLEAR SCREEN]
110 PRINT TAB(200):PRINT
    TAB(120)
120 PRINT "DEAR OLEG"
130 PRINT
140 PRINT "JUST A NOTE TO
    TELL YOU THAT NOT ALL"
150 PRINT "BRITISH PEOPLE
    THINK WE'RE SPIES!"
160 PRINT "INDEED, THEY HAVE
    ENOUGH INTELLIGENCE"
170 PRINT "NOT TO HOLD
    DOUBT ABOUT OUR
    MOTIVES."
180 PRINT
190 PRINT "YOURS, GENSCHER"
```

This program, like the others, is written so that it should run on everything from the Vic to the 128. But you can of course substitute other commands (such as SCNCLR in line 100) if you're using a C16/Plus 4 or 128.

Run this first part and the screen will display the text in the ordinary way. Now add these lines:

```
200 GET K$:IF K$ = "" THEN 200
210 PRINT [HOME]
220 PRINT TAB(240):PRINT
    TAB(200)
230 PRINT "[RVS ON][7 SPACES]
    [RVS OFF]"
240 PRINT TAB(25) "[RVS ON][12
    SPACES][RVS OFF]"
250 PRINT TAB(7) "[RVS ON][4
    SPACES][RVS OFF]"
260 PRINT
270 PRINT TAB(7) "[RVS ON][8
    SPACES] (RVS OFF)"
280 PRINT
300 END
```

Run this expanded version and the message will display normally again until you touch any key, when four words will be blanked out. Stringing only those words together will give the real meaning: BRITISH INTELLIGENCE HOLD GENSCHER.

Open letter cipher

A variation on this theme is the *open letter cipher*, in which a letter (most commonly the first) from each word it contains separately forms the secret message. So your agent in the field might send you the wistful observation, "My enthusiasm eventually tapers away to nothing in November evenings".

Having received this, you could either pull him in for early retirement or, better still, use this little string handling routine

to decipher it:

```
100 PRINT "TYPE WORD AND
    PRESS RETURN."
110 INPUT W$
120 IF W$ = "END" THEN 170
130 C$ = LEFT$(W$,1)
140 SC$ = SC$ + C$
150 PRINT
160 GOTO 100
170 PRINT SC$
180 END
```

There's much room for improvement; for example, you could have a program that accepts the whole message as a string that can be broken up into its separate word elements by using the invaluable INSTR function on the newer Basics to search for the between-word spaces. It would then just be a case of joining up the leftmost characters of each word.

The zigzag

There are many other ciphers where purely visual confusion is sufficient to hide the true meaning of the plaintext. The *zigzag* is one that is particularly easy to execute on your micro. In this, alternate letters from the plaintext are shown in the form of two strings one above the other, like this:

```
R D R P A S W L F L O
A A L N I L O L W
```

Displayed in this way, it's really very easy to fathom that the message is RADAR PLANS WILL FOLLOW, but if the lines are interpreted instead as two groups of characters, the meaning is more successfully disguised: RDRPASWLFLO AANILOL.

To decipher a message buried in zigzag code, use this routine:

```
100 PRINT "TYPE IN BOTH
    GROUPS WITH SPACE
    BETWEEN."
```



```

120 INPUT M$
130 FOR X=1 TO LEN(M$)
140 IF MID$(M$,X,1) = " "
    THEN 160
150 NEXT X
160 L$ = LEFT$(M$,X-1)
170 R$ = RIGHT$(M$, (LEN(M$)-X))
180 PRINT L$
190 PRINT " ";R$

```

Type in the example in response to lines 110 and 120 and the program will neatly redisplay the zigzag plaintext in its more decipherable form. You could add a second module that would automatically perform transcription from the original zigzag lines to character groups.

Encode mode

In the world of secret communications and espionage, some of the most effective of all techniques are based on super-encipherment and enciphered code, usually shortened to *encode*.

First, you take your plaintext and turn it into a cryptogram or cipher using a fundamental technique such as mirror coding, using the program given in last month's article. So for example, the first step might be to turn BORDER CROSSING CLOSED into DESOLC GNISSORC REDROB. You can then encipher this as zigzag to make:

```

DSL GISR RDO
EOC NSOC ERB

```

These characters in turn could then be grouped as DSLGISRRDO EOCNSOCERB. You won't find many people who'd be able to make much sense out of that — and yet it still contains every character used in the original plaintext!

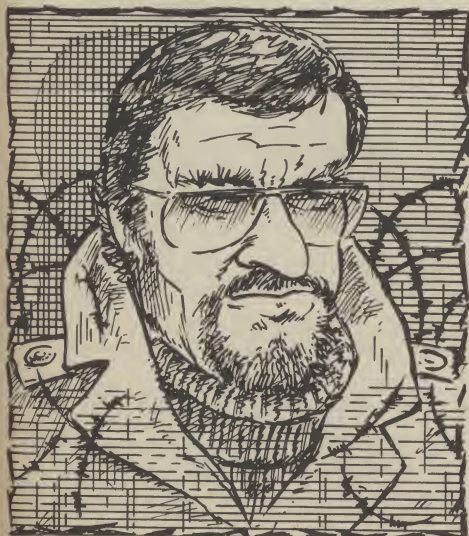
Returning to making particular use of your micro in creating video secret messages, here's a gimmick you might find useful:

```

100 PRINT [CLEAR SCREEN]
110 A$ = "[LIGHT BLUE]"
120 B$ = "[DARK BLUE]"
130 PRINT "HIDDEN HERE IS"
140 PRINT "A";B$;" SECRET";A$;
    "MESSAGE."
150 C = C + 1:IF C = 2 THEN END
160 B$ = A$:GOTO 130

```

This trick makes use of the ability to "hide" screen text in the background



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
A		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
B		b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a
C		c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b
D		d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c
E		e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d
F		f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e
G		g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f
H		h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g
I		i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h
J		j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i
K		k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j
L		l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k
M		m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l
N		n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m
O		o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n
P		p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
Q		q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
R		r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
S		s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
T		t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
U		u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t
V		v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
W		w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v
X		x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
Y		y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x
Z		z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y

The Vigenere Table

colour — the word SECRET is there all the time. Line 160 restores the usual light blue so that the whole message can be read.

Vigénère Table

Finally, using the knowledge gained from the mini-array program in **Part One** used to reconstruct a *Polybius Square*, you can now turn your programming skills to something a little more challenging — a micro interpretation of a keyword cipher devised by the *Blaise de Vigénère* in France in the 16th century.

This uses a table (see diagram) made up of 26 ordinary alphabets plus two more (in capitals for clarity's sake) at the top and left-hand side of the table.

To encipher a message, first decide upon a keyword — say, *micro*. Your plaintext might be the words, SEND AMMO. Using the first letter of the keyword (M) look down the vertical alphabet on the left of the table and then read across the alphabet printed horizontally against it (it begins with m) until you reach the letter falling immediately below the capital letter matching the first word of plaintext (S). This, you'll see, is "e". So that becomes the first letter of your code. When you've used up all five letters of your keyword, start again with M. Deciphering is simply a matter of working in reverse order — but you must of course know the keyword.

Refer back to the Polybius Square routine and you'll see that your first task is to DIM a two-dimensional array 27 cells square. Then it's just a question of devising and writing a routine to cross-reference the correct cell (and thus produce the cipher character) for every character of plaintext you enter.

The old national security budget's a bit on the low side at the moment but I dare say that we'll be able to come up with a suitable prize (a tastefully-framed print of GCHQ signed by Clive Ponting, perhaps?) for the reader who sends me the most elegant and efficient program for a computerised Vigénère Table. Your secrets are safe with me . . .

MAKE MONEY WITH YOUR MICRO!
you could earn over £50 per week — in your spare time — and
you don't need any special programming skills. . .

Send 17p stamp for details to: MICRO ENTERPRISE CLUB, P.O. BOX 21, MANCHESTER M168EA.

Penalty Shoot-out

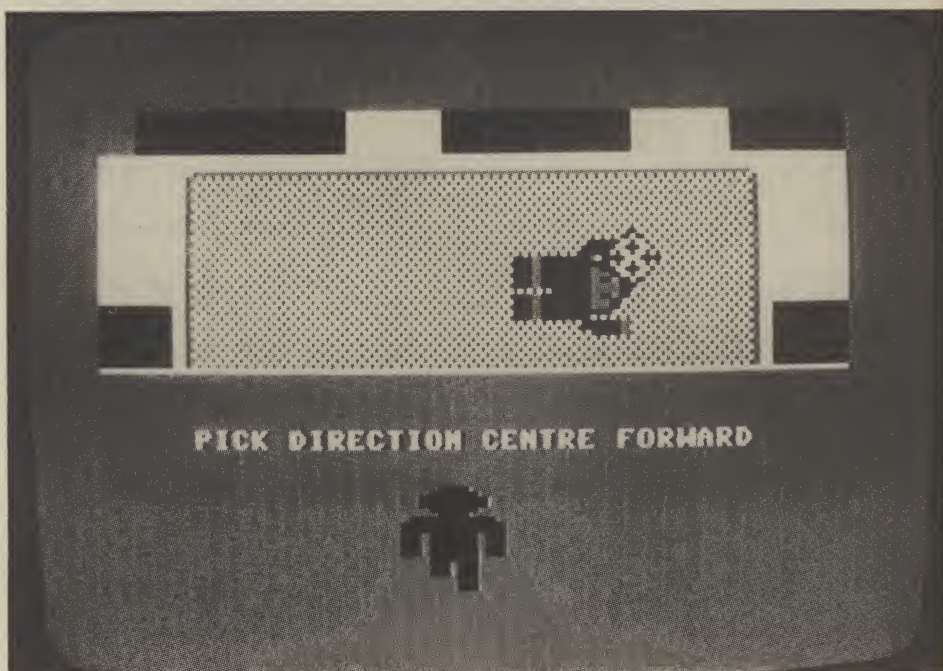


for the Commodore 64

by Stephen Rushin

And the ref's blown up for a penalty. The tension mounts as Bobby Booter places the ball on the spot. Which way will the goalie dive? In which corner will Bobby place his kick?

You'll need two players and two joysticks for this game. Full playing instructions appear on screen. To load, first type in and save the Sprite Loader, then the Main Program immediately after it on the tape. Rewind, load and run Sprite Loader followed by the Main Program.



Sprite Loader

```
1 PRINT"[CLS][WHT]PLEASE WAIT FOR SPRITES TO BE DEFINED"
10 V=53248
20 FORA=15680TO16128STEP64
30 FORB=ATOA+62
40 READC:POKEB,C
50 NEXTB:NEXTA
55 DATA0,252,0,3,239,0,15,171,192,14,238,192,2,170,0,0,184,0,23,171,80,85,253
60 DATA84,85,85,84,81,85,20,81,85,20,81,85,20,161,85,40,163,255,40,3,255,0,3
70 DATA207,0,2,138,0,2,138,0,1,69,0,1,69,0,3,207,0
110 DATA0,0,0,0,0,0,0,0,0,149,0,0,149,64,0,149,64,0,0,80,0,15,16,0,62,151,231
120 DATA58,151,231,238,151,231,234,215,231,234,215,231,238,151,0,58,151,231,62
130 DATA151,231,15,23,231,0,87,231,149,64,0,149,64,0,149,0,0
170 DATA0,0,0,0,0,0,0,0,0,0,86,0,1,86,0,1,86,219,213,0,219,213,240,219,213
175 DATA188,219,213,172,219,213
180 DATA187,219,213,171,0,213,171,219,213,187,219,213,172,219,213,172,219,213
190 DATA240,219,213,0,0,1,86,0,1,86,0,0,86
200 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,48,0,3,239,0,14,186,192,58,254
210 DATA176,238,186,236,255,171,252,238,186,236,58,254,176,14,186,192,3,239,0,0
220 DATA48,0,0,0,0,0,0,0,0,0,0,0,0
230 DATA0,252,0,3,255,0,15,255,192,15,255,192,3,255,0,0,252,0,21,85,80,85,85
240 DATA84,85,253,84,81,221,20,81,253,20,81,93,20,161,85,40,163,255,40,3,255,0
250 DATA3,207,0,2,138,0,2,138,0,1,69,0,1,69,0,3,207,0
260 DATA0,252,0,3,255,0,15,255,192,15,255,192,3,255,0,0,252,0,21,85,80,85,85
270 DATA84,85,253,84,81,221,20,81,253,20,81,93,20,161,85,40,163,255,40,3,255,0
280 DATA3,207,0,1,74,0,3,202,0,0,5,0,0,5,0,0,15,0
290 DATA160,252,40,163,255,40,95,255,212,95,255,212,83,255,20,80,252,20,85,85
300 DATA84,85,85,84,21,253,80,1,221,0,1,253,0,1,93,0,1,85,0,3,255,0,3,255,0,3
310 DATA207,0,2,138,0,3,207,0,3,207,0,0,0,0,0,0,0
320 DATA160,252,40,163,255,40,95,255,212,95,255,212,83,255,20,80,252,20,85,85
330 DATA84,85,85,84,21,253,80,1,221,0,1,253,0,1,93,0,1,85,0,3,255,0,3,255,0,3
340 DATA207,0,2,138,0,2,138,0,1,69,0,1,69,0,3,207,0
```


Main Program

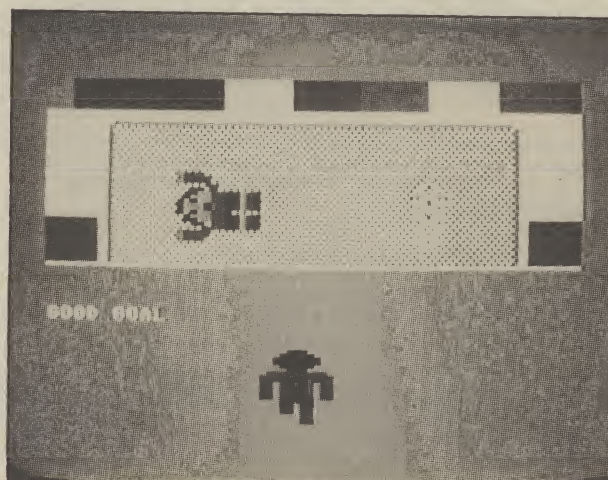
```

1 PRINT"[CLS][BLK]":L=0:SA=0:SC=0
5 GOSUB 3000
10 V=53248:X=150:Y=120:N=150:M=180:G=150:H=200:POKEV+40,1:POKEV+41,1
20 POKEV+21,255:POKEV+28,255:POKEV+23,255:POKEV+29,253
30 POKE53280,5:POKE53281,5:POKEV+37,11:POKEV+38,0:POKEV+39,9:POKEV+41,10
40 PRINT"[CLS]":FORZ=0TO1
50 PRINT"[REV][L RED][2SPC][BLU][6SPC][BLK][5SPC][WHT][5SPC][RED][5SPC][PUR][5SP
C][YEL][5SPC][ORG][5SPC][BLU]"
60 NEXT
70 PRINT"[REV][WHT][5SPC][29G<P][REV][5SPC]"
80 FORZ=0TO5
90 PRINT"[REV][4SPC][G<L][29G<+][G<J][4SPC]"
100 NEXT
110 FORZ=0TO2
120 PRINT"[REV][RED][4SPC][WHT][G<L][29G<+][G<J][RED][4SPC]"
130 NEXT
140 PRINT"[WHT][39G<Y]"
150 POKE2040,249:POKE2041,248:POKE2042,245:L=L+1
160 POKEV+0,G:POKEV+1,H
170 POKEV+2,N:POKEV+3,M
180 POKEV+4,X:POKEV+5,Y
200 REM
210 A=(56320):B=(56321):C=0:D=0
220 PRINT"[2CD][9SPC]PICK DIRECTION KEEPER"
230 IF PEEK(A)=127THEND=0
250 IF PEEK(A)=123THEND=2:REM WEST
260 IF PEEK(A)=119THEND=1:REM EAST
270 IF D<1THEN230
280 PRINT"[HOM][16CD][5SPC]PICK DIRECTION CENTRE FORWARD"
290 IF PEEK(B)=255THENC=0
310 IF PEEK(B)=247THENC=1:REM EAST
320 IF PEEK(B)=251THENC=2:REM WEST
330 IFC<1THEN290
340 REM CALCULATE DIRECTION
341 V=53248
345 POKE2040,250
347 GOSUB 4100
350 IF C=1 AND D=1 THEN1000:REM BOTH CHOOSE EAST
360 IF C=2 AND D=2 THEN1100:REM BOTH CHOOSE WEST
370 IF C=1 AND D=2 THEN1200:REM EAST/WEST
380 IF C=2 AND D=1 THEN1300:REM WEST/EAST
1000 REM BOTH EAST
1010 FORM=MTOM-85STEP-1:N=N+1
1020 POKEV+2,N:POKEV+3,M:NEXTM
1030 POKE2042,247:FORX=XTOX+50STEP3
1040 POKEV+4,X:POKEV+5,Y-20:NEXTX
1050 FORM=MTOM-80STEP-4
1060 POKEV+2,N:POKEV+3,M:NEXTM
1070 FORX=XTOX+20
1080 POKEV+4,X:POKEV+5,Y+X/20:NEXTX
1090 GOTO2000
1100 REM BOTH WEST
1110 FORM=MTOM-85STEP-1:N=N+1
1120 POKEV+2,N:POKEV+3,M:NEXTM
1130 POKE2042,246:FORX=XTOX-80STEP-3
1140 POKEV+4,X:POKEV+5,Y-20:NEXTX
1150 FORM=MTOM-80STEP-4
1160 POKEV+2,N:POKEV+3,M:NEXTM
1170 FORX=XTOX-20
1180 POKEV+4,X:POKEV+5,Y+X/20:NEXTX
1190 GOTO2000
1200 REM WEST/EAST
1210 FORM=MTOM-85STEP-1:N=N+1
1220 POKEV+2,N:POKEV+3,M:NEXTM
1230 POKE2042,246:FORX=XTOX-50STEP-3
1240 POKEV+4,X:POKEV+5,Y-20:NEXTX
1290 GOTO2500
1300 REM EAST/WEST
1310 FORM=MTOM-85STEP-1:N=N+1
1320 POKEV+2,N:POKEV+3,M:NEXTM
1330 POKE2042,247:FORX=XTOX+50STEP3
1340 POKEV+4,X:POKEV+5,Y-20:NEXTX
1390 GOTO2500
2000 PRINT"[CU]GOOD SAVE[31SPC]":SA=SA+1
2010 FORG=0TO500:NEXTG:GOTO2800
2500 REM
2505 PRINT"[CU]GOOD GOAL[30SPC]":SC=SC+1
2507 GOSUB 4000

```

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SEE PAGE 51



continued on page 51

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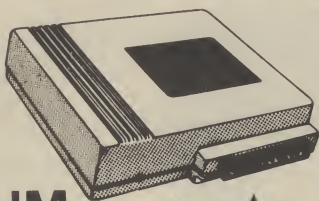
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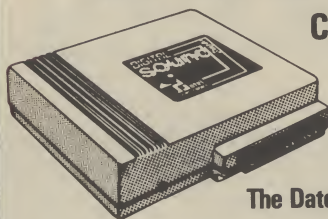
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continued from page 49

```

2510 FORM=MTOM+030STEP3
2520 POKEV+2,N:POKEV+3,M:NEXT
2525 K=253
2530 FORH=HTOH-40 STEP-1
2540 POKEV,G:POKEV+1,H
2570 POKE2040,251
2580 NEXT
2590 FORH=HTOH+40STEP1
2600 POKEV,G:POKEV+1,H
2610 POKE2040,249
2620 NEXT
2800 IFL<10THEN10
2805 POKEV+21,0
2810 PRINT"[CLS][2CD] SCORED ";SC;"SAVED ";SA
2820 END
3000 REM TITLES
3005 POKE53280,1:POKE53281,1
3010 PRINT"[CLS][BLK][2CD][11SPC]SOCCER SHOOT-OUT"
3020 PRINT"[CD][BLU][REV][39SPC]"
3040 PRINT"[CYN][REV][39SPC]"
3060 PRINT"[L BLU][REV][39SPC]"
3080 PRINT"[CD][2SPC]THIS IS A GAME FOR TWO PLAYERS,BUT "
3090 PRINT"[CD]THE GAME WILL ONLY BE ABLE TO BE PLAYED "
3100 PRINT"IF TWO JOYSTICKS ARE CONNECTED."
3110 PRINT"[CD][3SPC]PORT # 1 = THE FORWARD."
3120 PRINT"[CD][3SPC]PORT # 2 = THE KEEPER.."
3130 PRINT"[CD][2SPC]PICK EITHER LEFT/RIGHT FOR MOVEMENT"
3140 PRINT"[CD][YEL][REV][39SPC]"
3150 PRINT"[ORG][REV][10SPC]PRESS SPACE TO START[9SPC]"
3160 PRINT"[BRN][REV][39SPC]"
3170 GETA$:IFA$<>" THEN3170
3190 RETURN
4000 REM SOUND
4010 FORU=0TO24:POKE54272+U,0:NEXT
4020 POKE54296,15
4030 POKE54272,100:POKE54273,100:POKE54277,135:POKE54278,25:POKE54276,129
4040 RETURN
4100 REM SOUND
4110 FORU=0TO24:POKE54272+U,0:NEXT
4120 POKE54296,15
4130 POKE54272,100:POKE54273,100:POKE54277,45:POKE54278,5
4140 FORU=15TO0STEP-1:POKE54296,U:POKE54276,129:NEXTU
4170 RETURN
    
```

HOW TO USE EASY ENTER



COLOUR CODES

[BLK] — press CTRL and 1
 [WHT] — press CTRL and 2
 [RED] — press CTRL and 3
 [CYN] — press CTRL and 4
 [PUR] — press CTRL and 5
 [GRN] — press CTRL and 6
 [BLU] — press CTRL and 7
 [YEL] — press CTRL and 8

[ORG] — press CBM key and 1
 [BRN] — press CBM key and 2
 [L RED] — press CBM key and 3
 [GR1] — press CBM key and 4
 [GR2] — press CBM key and 5
 [L GRN] — press CBM key and 6
 [L BLU] — press CBM key and 7
 [GR3] — press CBM key and 8

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PRINT WHITE
 CURSOR DOWN
 REVERSE FIELD ON
 HOME
 PRINT RED
 CURSOR RIGHT
 PRINT GREEN
 PRINT BLUE
 FUNCTION KEY F1
 FUNCTION KEY F3
 FUNCTION KEY F5
 FUNCTION KEY F7

[F] FUNCTION KEY F2
 [R] FUNCTION KEY F4
 [S] FUNCTION KEY F6
 [E] FUNCTION KEY F8
 [I] CURSOR UP
 [H] REVERSE FIELD OFF
 [C] CLEAR
 [N] INSERT
 [P] PRINT PURPLE
 [L] CURSOR LEFT
 [Y] PRINT YELLOW
 [B] PRINT CYAN

OTHER CODES

[CU] — press 'cursor up' key
 [CD] — press 'cursor down' key
 [CL] — press 'cursor left' key
 [CR] — press 'cursor right' key
 [HOM] — press HOME key
 [CLS] — press CLEAR key
 [DEF] — press INST key (insert)
 [REV] — press RVS ON key (CTRL and 9)
 [OFF] — press RVS OFF key (CTRL and 0)
 [SPC] — press spacebar
 [G<key] — press CBM key with specified key
 [G>key] — press SHIFT key with specified key

EXAMPLES:

[3SPC] — press spacebar three times
 [5CD] — press 'cursor down' key five times
 [G>F] — press SHIFT key with 'F'

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```

100 SCNCLR
102 PRINT CHR$(8)
104 PRINT CHR$(142)
106 COLOR 0,6,3
108 COLOR 1,1
110 COLOR 4,5,6
112 POKE 65298,196
114 POKE 65296,0
116 POKE 65294,0
118 POKE 65295,6
120 POKE 65297,63
122 REM*****
124 REM 1. POKE IN MACHINE CODE PROGRAM
126 REM*****
128 FOR X=8192 TO 8255
130 READ MC
132 POKE X,MC : C=C+MC
134 NEXT X
136 DATA 169,32,141,17,255,166,198,189,0
138 DATA 33,224,52,240,49,201,0,240,238
140 DATA 141,15,255,189,0,34,141,16,255
142 DATA 169,40,141,17,255,188,0,38,189
144 DATA 0,35,153,192,13,228,198,240,252
146 DATA 189,0,37,153,192,13,166,198,189
148 DATA 0,33,201,0,208,214,76,0,32,96
150 IF C<>7835 THEN PRINT "BAD DATA IN 1":VOL 0:END
152 REM*****
154 REM 2. POKE IN NOTES MSB
156 REM*****
158 FOR X=8704 TO 8768
160 READ MSB
162 POKE X,MSB : C=C+MSB
164 NEXT X
166 DATA 0,0,0,0,0,0,0,0,0,0,0,1,1
168 DATA 0,0,0,1,0,0,1,1,0,0,1,1,0,0,2
170 DATA 2,0,0,0,2,0,0,2,2,0,0,2,2,0,0
172 DATA 2,2,0,0,2,2,0,0,0,2,0,0,0,0,0
174 DATA 0,0,0,0,0
176 IF C<>7866 THEN PRINT "BAD DATA IN 2":VOL 0:END
178 REM*****
180 REM 3. POKE IN NOTES LSB
182 REM*****
184 FOR X=8448 TO 8512
186 READ LSB
188 POKE X,LSB : C=C+LSB
190 NEXT X
192 DATA 0,0,0,0,0,0,0,0,0,217,169,0,0
194 DATA 6,49,0,0,0,89,0,0,127,163,0,0
    
```



```

196 DATA 229,197,0,0,4,32,0,0,0,59,0,0
198 DATA 84,108,0,0,152,131,0,0,173
200 DATA 243,0,0,227,192,0,0,0,210,0,0
202 DATA 0,0,0,0,0,0,0,0
204 IF C<>10727 THEN PRINT "BAD DATA IN 3":VOL 0:END
206 REM*****
208 REM 4. POKE IN BALLS
210 REM*****
212 FOR X=8960 TO 9024
214 READ B
216 POKE X,B : C=C+B
218 NEXT X
220 DATA 0,0,0,0,0,0,0,0,209,81
222 DATA 0,0,81,209,0,0,0,0,81,0,0
224 DATA 81,209,0,0,209,81,0,0,81,209
226 DATA 0,0,0,81,0,0,81,209,0,0
228 DATA 209,81,0,0,81,209,0,0,81,81
230 DATA 0,0,0,209,0,0,0,0,0,0
232 DATA 0,0,0,0
234 IF C<>13580 THEN PRINT "BAD DATA IN 4":VOL 0:END
236 REM*****
238 REM 5. POKE IN DELETE BALLS
240 REM*****
242 FOR X=9472 TO 9536
244 READ DEL
246 POKE X,DEL : C=C+DEL
248 NEXT X
250 DATA 0,0,0,0,0,0,0,0,160,32
252 DATA 0,0,32,160,0,0,0,0,32,0,0
254 DATA 32,160,0,0,160,32,0,0,32,160
256 DATA 0,0,0,32,0,0,32,160,0,0
258 DATA 160,32,0,0,32,160,0,0,32,32
260 DATA 0,0,0,160,0,0,0,0,0,0
262 DATA 0,0,0,0
264 IF C<>15404 THEN PRINT "BAD DATA IN 5":VOL 0:END
266 REM*****
268 REM 6. POKE IN KEY LOCATIONS
270 REM*****
272 FOR X=9728 TO 9792
274 READ L
276 POKE X,L : C=C+L
278 NEXT X
280 DATA 0,0,0,0,0,0,0,0,0,119
282 DATA 0,0,121,2,0,0,0,0,123,0,0
284 DATA 125,6,0,0,8,127,0,0,129,10
286 DATA 0,0,0,131,0,0,133,14,0,0
288 DATA 16,135,0,0,137,22,0,0,141,139
290 DATA 0,0,0,20,0,0,0,0,0,0
292 DATA 0,0,0,0
294 IF C<>17062 THEN PRINT "BAD DATA IN 6":VOL 0:END
296 REM*****
298 REM PREPARE SCREEN
300 REM*****
302 FOR X=0 TO 23
304 PRINT "13"
306 NEXT X
308 PRINT "3"
310 PRINT "XXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXX"
312 PRINT "XXXXXXXXXX| XX XX XX | XX XX XX XX XX | XX XX XX XX"
314 PRINT "XXXXXXXXXX| XX XX XX | XX XX XX XX XX | XX XX XX XX"
316 PRINT "XXXXXXXXXX| XX XX XX | XX XX XX XX XX | XX XX XX XX"
318 PRINT "XXXXXXXXXX| | | | | | | | | |"
320 PRINT "XXXXXXXXXX| | | | | | | | | |"
322 PRINT "XXXXXXXXXX| | | | | | | | | |"
324 REM*****
326 REM 7. WAS IT WORTH IT ???
328 REM*****
330 POKE 65297,5
332 FOR P=0 TO 2000:NEXT
334 COLOR 0,2
336 FOR X=3201 TO 3222
338 READ D
340 POKE X,D+128 : C=C+D
342 SOUND 1,900,2
344 FOR P=0 TO 50:NEXT
346 NEXT X
348 DATA 23,18,9,20,20,5,14,32,2,25,32
350 DATA 16,1,21,12,32,20,15,13,1,19,9
352 IF C<>17421 THEN PRINT "BAD DATA IN 7":VOL 0:END
354 SYS 8192

```


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SuperScript

writes letters, invoices, reports, tables, documents, it stores, edits and even checks spelling.

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Good with numbers SuperScript allows you to extend your editing line up to 250 columns for wide documents like financial statements, and with decimal tabs it's easy to enter properly justified tables of numbers. SuperScript's complete set of calculator functions can be used interactively or you can operate on numbers from the text of your document. Apart from the usual mathematical functions like add, subtract, multiply, divide, and percentages, you have the ability to add rows, columns or even whole tables.

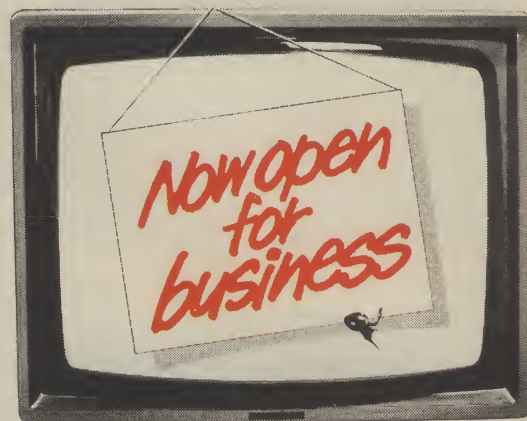
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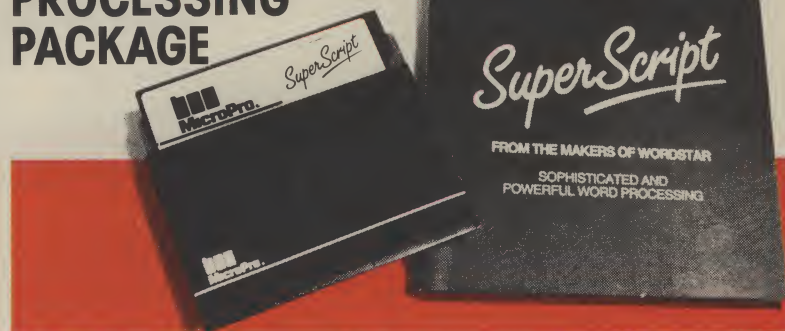


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Commodore 64 Chart

This chart is based on the MicroScope chart as compiled by Gallup.
GALLUP
MicroScope is the weekly trade paper of the microcomputer industry. If your computer store doesn't display the latest MicroScope chart, ask the manager to call Mark Salmon on 01-431 1433 - we'll send a copy every week.

Chart Chat

We usually like to boast on this page that "we told you so" with our tips for the top dominating the highest positions in the charts.

Well just to prove that we are not afraid to own up when we get it wrong *Commando* is the game that beat the CU tipsters — riding high at number one in both charts.

In last month's head-to-head comparison we favoured *Rambo* by a short bayonet.

The tipsters were not completely bested though — with *Winter Games* and *Little Computer People* coming straight in at numbers 4 and 3 respectively.

The most interesting new entry is *Mercenary* at number 10 — which must have sold very well indeed to make such an impact on the charts after only a few day's sales. It's a Screen Star, and it's one to watch in the charts.

With this month's other Screen Star — *Rock 'N' Wrestle* — it looks as though Melbourne House could well be at the top of the charts again soon.

NEW	Commando	Elite
NEW	Rambo	Ocean
NEW	Winter Games	Epyx/US Gold
NEW	Little Computer People	Activision
NEW	Fight Night	Sydney /US Gold
6	The Last V8	Mastertronic
NEW	They Sold A Million	Various
NEW	Arcade Hall of Fame	Various
9	Summer Games II	Epyx/US Gold
NEW	Mercenary	Novagen
11	Way of the Exploding Fist	Melbourne House
12	Elite	Firebird
13	Racing Destruction Set	Ariolasoft
14	Monty On The Run	Gremlin Graphics
15	Kickstart	Mastertronic
16	Beach Head II	Access/US Gold
NEW	Computer Hits 10	Various
18	Action Biker	Mastertronic
NEW	A.C.E.	Cascade
NEW	Pitstop II	Epyx/US Gold

General Chart

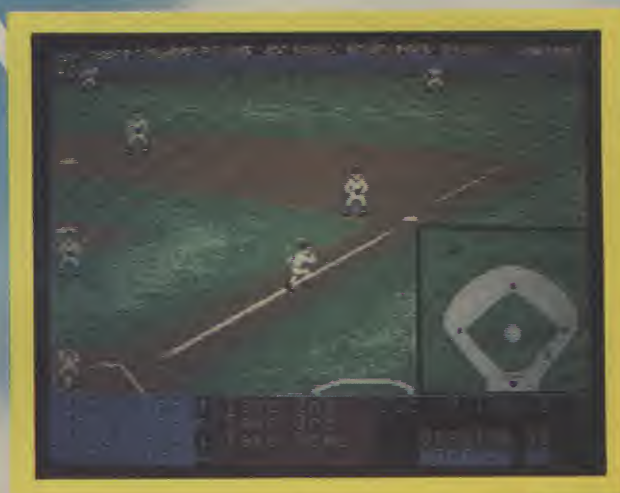
NEW	Commando	Elite
NEW	Yie Ar Kung Fu	Ocean
3	They Sold A Million	Various
NEW	Rambo	Ocean
5	Elite	Firebird
6	Way of the Exploding Fist	Melbourne House
7	Computer Hits 10	Various
8	Formula One Simulation	Mastertronic
9	Winter Games	Epyx/US Gold
NEW	Back to Skool	Microsphere

11	Finders Keepers	Mastertronic
NEW	Little Computer People	Activision
NEW	Tomahawk	Digital Integration
NEW	Beach Head II	Access/US Gold
15	Action Biker	Mastertronic
16	BMX Racers	Mastertronic
NEW	Arcade Hall of Fame	Various
18	Monty On The Run	Gremlin Graphics
NEW	Fight Night	Sydney/US Gold
NEW	Gyroscope	Melbourne House

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ALL-STAR	8	at	Pos	Aug						CHAMPS	8	at	Pos	Aug
Allen	X	2	10	2383	McCall					L	2	10	2383	
Jose	X	2	10	2383	DeSoto					L	2	10	2383	
Miller	X	2	10	2383	Contos					L	2	10	2383	
Craven	X	2	10	2383	Barnes					L	2	10	2383	
Lorenzen	X	2	10	2383	Myden					L	2	10	2383	
Laws	X	2	10	2383	Morra					L	2	10	2383	
Bautista	X	2	10	2383	Mills					L	2	10	2383	
Whatten	X	2	10	2383	Varian					L	2	10	2383	
Doggett	X	2	10	2383	McCall					L	2	10	2383	
P. Frisina	X	2	10	2383	Euler					L	2	10	2383	

HardBall!

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BY
JOHN RANSLEY

Superheroes of today just can't match the epic mythical variety. So if you think Ulysses makes Rambo look vitamin deficient, this month's crop of adventures is for you. We also take a sleuthing look at *Masquerade* and the magically Quilled The Snow Queen from St Brides — remember Kay and Gerda?



Ulysses must ask the King what to do.

Ulysses and the Golden Fleece
US Gold/Sierra
GrA
Price: £14.95 disk

Greek mythology has already served as the inspiration for more than a few text and graphic adventures, but it is such a rich vein of marvellous stories and fabulous characters, little wonder that it's one that continues to be reworked.

Ulysses and the Golden Fleece from Sierra On-Line, is now available in the UK on US Gold's All American Adventures label.

You are Ulysses reborn and summoned

by the Gods to quest again for the wonder of woolies. You must first explore the town in which you find yourself at the start of the adventure, recruiting a crew and assembling provisions for your perilous voyage to the Island of Storms — there to find magical, mystical objects that should be of help to you.

After setting sail again, you may eventually navigate your ship successfully to Colossal Island — where sirens, cyclops and lethally-animated skeletons pose you many more teasing challenges than a vestal virgin on a Club 18-30 fortnight in Benidorm.

Confining the player as they do mainly to verb/noun inputs, authors Bob Davis and Ken Williams are hardly in the run-

ing for this year's Platinum Parser award but the more I learn about reader's preferences, the more I wonder whether an adventure's ability to accept endlessly concatenated commands is something that impresses other programmers rather more than the paying public. For even when multi-cause inputs are accepted, it seems that many gamers tend, as I do, to pussy-foot through the adventure one command at a time, rather than have to figure out which of the three or more actions I've keyed is illegal.

At least the verbs in *Ulysses* extend beyond the usual GO, LOOK, GET variety to embrace — as befits a man of the gods — such useful get-outs as jump, fly and swim. You can of course stow and restore a

Masquerade
US Gold/American Eagle
GrA
Price: £9.95 disk

Another new title from All American Adventures — and very different from Ulysses — is *Masquerade*. It's a kind of gumshoesque quest by Dale Johnson first published only last year in the States by American Eagle Software — and it has a lot going for it.

In this you play a detective who has the task of tracking down a notorious hit man, and your day begins sharing a hotel room with a body, locked briefcase and an empty magnum. There are plenty of people around who'd like you to make their day — witness the sticks of dynamite tastefully



Become an angel when you die.

adorning the phone booth in the hotel lobby, and the sinister figure who keeps shadowing you.

The graphics by Rick Incrocci are very

good indeed, reminding me of the style used for *Mindshadow* — and they made it even more fun exploiting the game's generosity in allowing one to explore a number of nicely-illustrated locations before having to tackle any serious problem solving. Like *Ulysses*, input is confined mainly to verb/noun pairs and again it's possible to toggle between the graphic screen and the last couple of dozen lines of text. Newer adventures will appreciate the way that a beep is used to signal a significant development in the game — the more experienced will mute the sound to make play a little more difficult. So slip on that trench coat, grab your snap-brim hat, and practice your Bogart lip in readiness for your first shakedown of this highly enjoyable and, for a change, contemporary adventure. You'll want to play it again.

Odyssey
Duckworth
TA
Price: £9.95 disk/cass

Mike and Pete Gerrard have become something of the Brothers Grimm of microadventures, having between them written not only countless articles and books on programming and playing adventures (*Exploring Adventures on Your 64* and *The Adventurer's Companion* among them) but also an earlier Duckworth title, *Island Adventure*.

The Odyssey is an out and out text adventure that soaks up 80K of data spread across two tapes in reliving Homer's epic tale of Odysseus's attempts to return to his kingdom, and to his faithful wife, after 10 years of headbanging the citizens of Troy. After getting together a crew and provisions, you set sail (sounds familiar?) and prepare yourself for encounters with the race of giants, cyclops, a six-headed monster and the whirlpool — and that's even before you venture into the City of Perpetual Mists and figure out how to

*** THE ODYSSEY ***

After ten years the siege of Troy has at last ended with the destruction of the city, and you, King Odysseus, must make your way home to your island kingdom of Ithaca, off the coast of Western Greece.

In all these years you have not seen your wife Penelope, nor your son Telemachus, and rumour reaches your ears that all is not well within your kingdom.

You must return to reclaim your throne, and bring peace to Ithaca.

Press 'space' to begin your quest.

escape the wrath of Poseidon and win the battle that is this adventure's grand finale.

The Odyssey is, in terms of its storyline, structure and screen presentation, a considerable improvement on *Island Adventure* and it's fat enough, and tricky enough, to give many, many hours of ar-

cane entertainment.

Literary Merit	★★★★
Intelligence	★★★★
Toughness	★★★★
Value	★★★★

game in progress — but beware that the SAVE routine used in this instance totally reformats the disk you use, thus wiping anything it may already contain.

Graphics on *Ulysses* are bright and brassy — not too much detail but at least they're colourful and jumbo size, and you can toggle between graphics and the last screenful of text — or just plump for text alone. All this and the chance to be the most cultured adventurer on the street.

Graphics	★★★
Literary Merit	★★★★
Intelligence	★★★★
Toughness	★★★★★
Value	★★★★



Graphics	★★★★★
Literary Merit	★★★★★
Intelligence	★★★★
Toughness	★★★★
Value	★★★★★

● ADVENTURE NEWS ● ADVENTURE NEWS ● A

● **Global Software** have rounded on me with a few more details of *Old Scores*, the follow-up to their first adventure title, *The Magician's Ball*. It will feature more than 240 locations around London's South Bank arts complex, hi-res graphics with detailed and "literate text descriptions" (can't be the South London I know), and Mozart's Dice Waltz — the computer fulfilling the composer's intention that any of its 36 bars could be played in a random order and yet still produce a real minuet. Player features include multi-character encounters by making use of the voucher that comes with each game entitling you to a free backstage tour of the Royal Festival Hall.

● **Telarium** have at last got Perry Mason into the courtroom to solve *The Case of the Mandarin Murder*. Now you too can mercilessly cross-examine witnesses, introduce surprise evidence, have private counsel with the judge and try to make the jury weep — just like Erle Stanley Gardner's famous creation. Also, new-wave American science fiction author Roger Zelazny has helped to adapt a brace of his best-selling stories in the creation of Telarium's other new title, *Nine Princes in Amber*. It offers a stupendous 40,000 different game variations and no fewer than 40 possible endings. Both titles are available on disk only at £19.95.

● **Sigma Books** are publishing a new-style guide to adventure authorship, *Adventure Description Language*, aimed at explaining the secrets of creating large-scale games on home micros. Contents include chapters on how to write an ADL compiler and interpreter. Price is £8.95.

● **Hallo John** — got a new 128? Yah, ektcherly Ron — and I'm revelling in the goodies BASIC 7.0 brings to DIY adventure programming. Watch out for a couple of useful routines that make use of them in next month's column.

● **Commodore UK** aren't saying just which of Britain's top adventure houses are among the 200 software houses that have snapped up one of their Amiga development kits but *Adventure International*, Level 9 and *Melbourne House* are certain to be on the list. The Corby connection's quaint decision to market the Amiga — with its futuristic graphic and sound capabilities — as a business micro initially to run boring old spreadsheets and the like isn't considered a Bad Thing by adventure houses, who reckon that the young upwardly mobile types who'll want an all-singin' and dancin' Amiga on their desk now that the novelty of their cellular phone's worn off are much more likely to fork out for an adventure to play in the lunch hour than any other type of game. The rest of just sit, and wait, and save... and save.

Snow Queen
St. Bride's Software
TA
Price: £8.95 disk

Domark, having won an envious reputation for quality software with *Eureka!* and then having lost it even more quickly in the eyes of many observers (myself included) with *Friday the 13th* (in which the paucity of the game itself was surpassed only by the vile way Domark chose to promote it) may kick themselves one day for not having exploited instead the works of rather classier exponents of horror, such as the Brothers Grimm.

St. Bride's Software seem to be the first to recognise the treasure house of games ideas locked in the literature of the past century, and have in **The Snow Queen** adapted Hans Christian Andersen's classic children's tale with integrity and care.

Here is to be found the jovial but malevolent hobgoblin, Kay and Gerda, that oddly articulate crow, the prince and the palace, and all the other familiar and fabulous elements of the master storyteller's magical art. The game makes the most of its origins in *The Quill*, and

```
I am in a little bedroom. It is my
grandmother's. There is her wardrobe,
and her washstand over there. A door
is in the East wall.
And I can see:
my grandmother sleeping peacefully in
her bed.

Now what could be best to do?
OPEN WARDROBE
Oh no. That would not be right.

Please tell me what to do next.
EXAMINE GRANDMOTHER
Dear Grandmother! She is sound asleep.

Please tell me what to do next.
LOOK AROUND
I cannot see anything important.

Can you advise me?
EXAMINE WASHSTAND
```

the authors have it seems learnt from their experience of writing *The Secret of St Brides* the importance of unambiguous screen responses and crisp layout. *The Snow Queen* looks well and plays well; it will soon have you talking to the flowers and chatting to the raven — but watch your step at the inn, and that palace sentry doesn't need a blood-spattered hockey mask to make you know he means business.

Graphics	★★★
Literary Merit	★★★★
Intelligence	★★★
Toughness	★★★
Value	★★★

● CHARTS ●

1	(3)	The Worm in Paradise — C64/128 (Level 9, GrA, £7.95)
2	(4)	Adrian Mole — C64/128 (Mosaic/Level 9, GrA, £7.95)
NEW 3	(-)	The Lord of the Rings — C64/128 (Melbourne House, GrA, £15.95)
4	(5)	Savage Island (Parts 1 & 2) — C64/128 (Adventure International, GrA, £9.95)
5	(-)	Neverending Story — C64/128 (Ocean Software, GrA, £9.95)
6	(1)	Robin of Sherwood — 64/128 (Adventure International, GrA, £7.95)
NEW 7	(-)	Seas of Blood — C64/128 (Adventure International, GrA, £9.95)
NEW 8	(-)	Quest for the Holy Grail — C64/128 (Mastertronic, GrA, £1.99)
9	(7)	The Magician's Ball — C64/128 (Global Software, GrA, £7.95)
10	(6)	Terrormolinos — C64/128 (Melbourne House, GrA, £7.95)

Level 9's best-ever adventure, concluding the *Silicon Dream* trilogy in which *Snowball* and *Return to Eden* are the other two parts, deservedly races straight to the top spot in this month's placings, and our February chart also marks the Top 10 debut of three other worthy recent offerings.

Chief among them (it is barely necessary to add "of course") is the stunning *Lord of the Rings*. Why bother to call it the sequel to *The Hobbit*? After all, a whole new micro generation has grown up since Bilbo & Co. were first captured in silicon back in the days when we all thought that the only good things to come out of Australia were Fosters, Barry Humphries and Olivia Newton-John's return ticket. It's the most expensive title in this month's chart but remember that the pack includes a copy of Tolkien's book and two versions of the game — one of them a simpler version for younger or novice players — at only £1 more than *The Hobbit* cost three years ago.

Adventure International's new-style *Seas of Blood*, combining combat interludes and other innovations with the solid craftsmanship you'd expect of a Howarth & Woodroffe graphic adventure, sails into sixth position, while Mastertronic's budget-priced version of *Dream Software's* gleaming if not exactly golden oldie stays hot on its heels.

Global Software's first adventure title, despite a luke warm reception by some reviewers, remains popular in the Valley, but it looks like the end of the season for *Terrormolinos*. Next month, will *The Lord of the Rings* wriggle their way past *Paradise* and into the top spot? Can *Adrian Mole* survive the charts for another term? And what are the chances of an All-American hero venturing into our chart? Watch this space!

● ADVENTURE NEWS ●

● **Ocean's** new *Laser Basic* extended games writing language — an enhanced version of *White Lightning* — should be good news to would-be Pete Austins for being able to support full string handling, hi-res graphics and most of the other features of commercial products. Watch out for a full review in *User* soon. Meanwhile, still no sign yet (yawn) of Gilsoft's long-promised *Illustrator* on disk for the 64 — in the absence of which is a 64 version of Incentive Software's *Graphic Adventure Creator* would be very good news... but will they release such an animal?

● **Electronic Art's** founder Tim Mott probably made time to court one or one dozen disenchanted adventure authors on his recent British visit. EA, whose arcade and strategy games are marketed here by Ariolasoft, may be a little envious of Infocom's grip on the lucrative and prestigious text adventures market in the States — and a number of 'serious' British software authors specialising in the genre are thought to be a little peeved with the policy of several domestic distributors and retailers to handle only adventures that incorporate pretty pictures.

● **Just the thing** to slap on the Dansette when you tire of all those Nolan Sisters and Black Lace compilations gran bought you for Christmas — a double album crammed with atmospheric music devised by Gary Gygax, inventor of the original *Dungeons and Dragons* board game. Lots of good rock instrumentals, creepy verbals and special effects make it just the thing to pump through the cans (or Walkman — it's on cassette too) while tackling *Winnie The Pooh in The 100 Acre Wood*, or whatever. It's on the Filmtrax label.

● **Infocom** have finally struck a deal with a British software dealer (as the Valley predicted a couple of months ago) to market lower-priced versions of existing and new top-drawer titles such as *The Hitchhiker's Guide to the Galaxy*. But the Infocom Classics range to be distributed by Softsel will be versions that run on the C128 and Amiga but not on the 64. HHG will sell at £24.95 and older titles such as *Deadline*, *Planetfall* and *Zork I* at £19.95 (they're anyway available in 64 versions from Commodore UK on disk at £11.99). I'll be reviewing the newest CP/M title, *Seastalker*, soon.

● ADVENTURE NEWS ●

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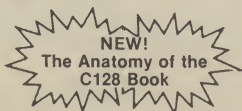
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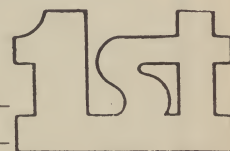
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Going soft on the Amiga

Dan Gutman reports

Our man Stateside, Dan Gutman has been raving about the Amiga since he got a sniff of it in the Summer of last year. This month he reports back on the steady trickle of software that's coming through over there for Commodore's super machine.

Dear Amigos, Are you depressed because the manufacturer of your computer lost \$39.2 million in the most recent quarter? Hey, anybody can have a bad day. And for Commodore, things are looking up — at least they are in the States. The 64 is still selling in small quantities, the 128 is doing well, and the Amiga is getting rave reviews. It started showing up in stores here in October, and Commodore claims to have shipped 70,000 by the end of the year.

Commodore's mission right now is spelled S-O-F-T-W-A-R-E. They've distributed 400 Amigas to American software developers, and 900 more have received the machine's technical specifications. There's also the "Amiga Information Network", an on-line "electronic town square" so software developers can contact each other and trade tips.

One guy told me that Commodore deliberately flooded the stores in Boston and Silicon Valley with Amigas. The reason? There are a lot of unemployed programmers who live in those areas, and Amiga needs software badly. On the whole, the software developers who already have the machine are saying that Amiga is easier to program than Apple's Macintosh, which suffered from a lack of software for more than a year after its introduction.

Broken promises

The bigshots at Commodore, naturally, are optimistic. Frank Leonardi, the vice-president of sales, claims there will be 100 Amiga programs by March. Of course, Commodore *also* promised 35 programs by the end of November and we know what happened to that promise.

Thomas Rattigan, the new president of Commodore, has been pretty honest about the whole thing. He told InfoWorld (an American magazine), "It's not coming as rapidly as we would have liked to have seen it come."

Because of the lack of soft-

grams so far, many more to come. Presently available: Textcraft word processor, Amiga Assembler, Amiga Pascal, Amiga Lisp, Amiga C, Amiga Graphicraft graphics design. Obviously, Commodore is making the tools to develop programs available for third party



ware, the people buying the Amiga right now in America are mostly hackers and software developers, who don't need pre-packaged software. But we're also seeing a lot of artists lusting for the machine, as well as television stations, which are using it to design graphics. And of course, a lot of Commodore 64 owners are leap-frogging over the 128 to buy Amigas.

I've begun to compile a list of Amiga software that is available in the U.S., soon-to-be available, or even rumored to be coming.

Software File

• **Commodore** — Six pro-

• **MaxiSoft** (Pebble Beach, California) — Two programs: MaxiComm, a communications package, and Maxidesk, a package of desk accessories.

• **Sublogic** — Flight Simulator II. They haven't announced this yet, but everybody knows that the best selling computer game in the world is in the works for the Amiga.

• **Chang Labs** — Rags-To-Riches, a series of accounting programs.

• **Lattice** (Glen Ellyn, Illinois) — A bunch of programming tools on the way: Unicalc, dBC III File System, Text Utilities and others.

• **Enable** — Enable/Calc, Enable/File expected by the time you read this. By the way, Commodore is hyping up the Amiga business programs and downplaying the entertainment programs. Conventional "wisdom" in the U.S. is still that the home computer doesn't exist. Fools.

That, of course, doesn't even scratch the surface of software that's in development. Other companies are openly discussing plans for the Amiga. Among them: Mindscape, Activision, Microsoft, Broderbund, and Epyx. Naturally, I'll keep you posted. It doesn't seem like there's any doubt that within months the market will be swarming with programs. That's good for Commodore, good for the software companies, and good for you and me. Apple, IBM and Atari may not be too happy about it, but that's another column. Amiga is here to stay.

Last word on Tramiel

Incidentally, Commodore fans might be interested to know how old Jack Tramiel is doing over at Atari. As you know, Commodore's long-time chief bought the company about a year ago. Well, amazingly, the new Atari 520ST is selling very well over here. For a long time people were saying that Jack was crazy and that Atari didn't stand a chance.

But Jack got the 520ST out the door before Commodore put the Amiga on the market, and it looks like Atari will be with us for a long, long time. In fact, a lot of people here are buying the 520ST instead of the Amiga because the ST is so inexpensive. Tramiel always seems to find a way to do it.

See y'all real soon. □



By Mike Pattenden

Welcome once again to the column that brings you the flotsam and jetsam of the software world, the page that trades in truths (well half-truths) and *(get on with it, Ed.)*

Right, well you may have wondered why, when you went into Boots and John Menzies to buy your copy of Friday 13th, you got a tape with a black cover. Well, the two stores refused to stock the game with that tasteful cover — you know, the mask with the knife through the eye. Boots also objected to the blood capsules — something to do with it being a pharmacist. Undeterred, Messrs Strachan and Wheatley — directors of Domark — sent out a Christmas card with them in seasonal Santa gear brandishing chainsaws in front of a wall covered in blood . . .

Sticking with Domark, expect a simultaneous release of a record, a video and a game soon. The company are currently negotiating a game based on the M 'Pop Music' single (— remember? 'Talk about — pop music') with the record being rereleased to coincide. More info soon . . .

Now a few non-appearances: It's a case of 'Scooby Scooby Doo where are you?' because the game has been shelved. "Postponed indefinitely" to quote Elite's Steve Wilcox precisely (as I always do). "What we had was exceptional but we couldn't get enough of it in." Sales of the 128 might lead Steve to consider a 128 only version. Another article less likely to be missed which has disappeared into that great Bermuda Software Triangle is *Challenger*, the £1,000 quiz game. Seems the prize wasn't enough for you lot . . .

If you've seen a copy of *Bladerunner* at all, you may notice that the packaging declares that it is '... a Video game interpretation of the film score by Vangelis'. The reason being that when CRL decided to make the game, they couldn't trace the film rights. It's ironic in my opinion that the game's music should be the best aspect of the game . . .

Where's the System 3 hotshot you

Games Plus Games Plus Games

DEAR ^{AST} OWNERS
We of the
P.P.L.O.
(PEOPLE'S LIGION)
ORGANISATION
have personally
ACCOUNTED
FOR 7 OF THE
BERKS
WATCH OUT
PEOPLE HERE'S THE
P.P.L.O.
AND HERE!

This poisonous little note popped through the letter box recently. I must admit I have to admire the style of it. These people have a definite aim in mind. Not your average terrorist organisation either. Loathe, as I am to admit it, the little computer pillocks may have their uses. Think of the fun in torturing them or continually bleeding them dry at poker. Nevertheless more info on the PPLO would be appreciated. Incidentally I've been getting calls asking me why some of them don't have names. The answer is that only disk version has them. They do take showers I am reliably informed, you just have to be patient.

ask? Mark Cale asked the same thing at the our Christmas party. "What you gonna write about me this month?" he slurred, pouring a glass of wine all over a C&VG secretary. "Me? Nothing I spluttered. "But I did get a phone call from your PR man Leslie Bunder earlier today announcing he hadn't been sacked, for some strange reason." "Rubbish," cried Mark brandishing a bottle, "of course he was sacked!" Incidentally Archer Maclean is currently working on *International Karate* for System 3, the programmer responsible for the excellent *Dropzone* . . .

The battle between Elite and Alligata over *Commando/Who Dares Wins* continues. Both sides are convinced of a very profitable victory in this software whodunnit, but Alligata were so pleased at the changes that they were forced to make to the game that a representative expressed the wish that "... we get a writ every time we try to put out a game if that's what happens . . .

As for the *Commando v Rambo* shootout, it looks like Elite won that one, but it seemed to me to become as much a battle of the bugs. Did you know that you can release the rest of the P.O.W.s in *Rambo* before you have freed the first man in some versions? Or that by changing to the right of the screen whilst firing in *Commando* you can make GI Joe disappear completely? Maybe you did . . .

Whilst we're on the subject of the Emap Xmas bash I noticed some of the dress styles in evidence. Microgen's Mike Meek was there in a

frilly shirt, Phil Pratt of Firebird appeared in a very dark suit, Jeff Minter arrived clutching a plastic bag and sporting an Afghan coat, Rod Cousens, probably expecting another award, was in a dinner suit, and Activision's Andrew Wright was sporting his customary braces on shirt sleeves and Wyatt Earp tie look. Am I about to draw some massive conclusion about the state of the software industry from all these variegated styles? No.

The game makers were in a charitable mood again this Christmas announcing their second Soft Aid tape in aid of the Prince's Trust — an organisation set up to help young people with drug and alcohol problems.

Soft Aid II will be called "Off the Hook" with games from most of the major companies in the business including U.S. Gold, Firebird, Activision,

Elite, Beyond and Melbourne House.

Once again the whole computer games business is rallying round with support for this good cause — magazines with free advertising space, distributors and shops with "no margin" shelf space, and executives from Software Companies with their time to administer the tape.

The full list of titles for the 64 tape has not yet been released — though we do know it will have six games on it and cost £6.99

To get "Off the Hook" off to a sparkling start a vintage bottle of champagne was auctioned at a prestigious dinner in London's Park Lane. After a series of bids and counter bids from US Gold/Ocean/Centre Soft and all their affiliated American labels on one hand and Firebird/Beyond/Epyx and Melbourne House on the other, common sense finally settled upon the proceedings and it was decided that no one company or group of companies would win the champagne but that everyone who had bid for it would share it at a cost of £1,000 each.

Melbourne House's boss Geoff Heath was the peace-maker who organised the joint bid — though not before his old company, Activision, received some noisy heckling for refusing to bid.

There were fourteen takers in all which worked out at slightly less than a half a glass each — certainly the most expensive drink ever supped by one Clement Chambers — boss of CRL — drafted in because thirteen was considered an unlucky number. It certainly was for him.

"How did it taste, Clement", this Hot Shots ligger enquired. "Not particularly special, just a dry sparkling white," said Clem, with a brave smile.

But it was not all sweetness and light at the game makers annual Xmas bash. Some of the women guests protested to the organisers when a stripping police woman turned up to read a poem and plant a kiss on the cheeks of Greig Ingham — the editor of the trade newspaper *Computer Trade Weekly*. Tacky Greig, tacky . . .



"Am I bid n-n-nineteen thousand for this bottle?" asks Rory Bremner. David Ward ducks for cover. Can you spot him readers?



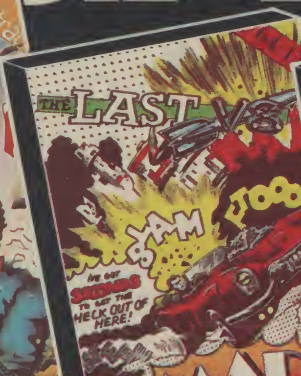
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Success

The Epyx Story

by Dan Gutman

You can't call yourself a true gamer if you don't own an Epyx game. The quality of games that has been coming across the Atlantic from them has been staggeringly good. Sports simulations, racing games, platform games, whatever they put their hand to becomes a classic it seems. We sent our man in the US, Dan Gutman to find out how Epyx do it.

The skier waits poised at the top of the jump. The bell sounds and he begins his descent. He slides down smoothly, rushes to the hook of the launch, and lifts gracefully into the air. He hangs there for what seems like an eternity, tilts his body forward, and executes a perfect landing. The crowd goes wild.

You're not watching a preview of the 1988 Olympics — you're playing *Winter Games*, the number one Epyx title and one of the first titles available for Commodore's spectacular Amiga computer. If you thought the C-64 version was good, the Amiga version will blow you away.

While most of the other companies in the States release the same old tired ideas or simply go bankrupt, Epyx just keeps coming: *Temple of Apshai*, *Jumpman*, *Pitstop*, *Summer Games*, *Summer Games II*, *Impossible Mission*. Hit after hit after hit. *Winter Games* which was released in the fall of last year, had already sold 200,000 copies by the end of 1985. Epyx seems unstoppable and are undoubtedly the biggest entertainment software house in America.

The company — located in the heart of Silicon Valley — was started back in October 1978 by Jim Connelley, a rabid Dungeons & Dragons fanatic. The three-man company called itself

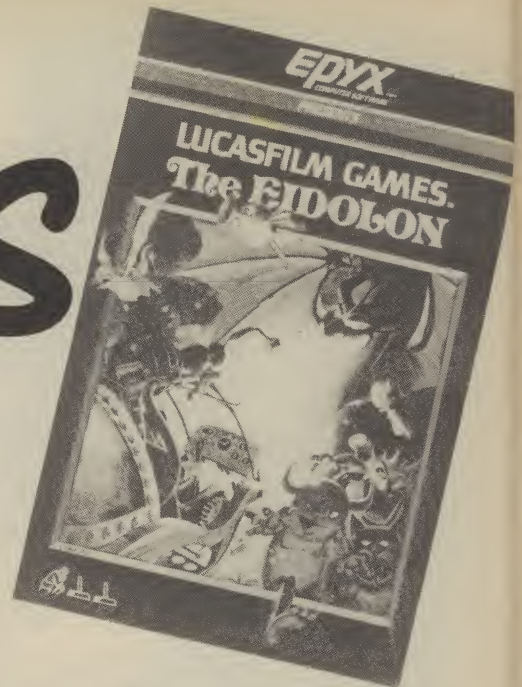
"Automated Simulations" at the start, and released *Temple of Apshai* — one of the first microcomputer games. In 1980 they changed the company's name to "Epyx". Why Epyx? Because the games they created were "epic" in nature.

"The name 'Epics' had already been taken by somebody else," remembers Vice President of Marketing, Bob Botch, "So it was changed to 'Epyx' to sound a little more to computer-esque."

Today, Epyx games are distributed in more than 40 countries (in Britain their games are brought to you by U.S. Gold). Epyx took in nearly \$20 million in revenue last year. Jim Connelley left in 1983 to form his own software development group, but the hits keep coming.

From the start, Epyx games have been different. When everyone else was churning out the eye/hand coordination "blow their brains out" shooting games, Epyx concentrated on strategy and thinking games. (In fact, the Epyx logo is Rodin's statue of "The Thinker" . . . holding a joystick) *Temple of Apshai* got the ball rolling, attracting hoards of adventure game lovers. In 1983 Epyx turned science fiction guru Isaac Asimov's bestselling book *Robots of Dawn* into a bestselling all-text game. Even the traditional joystick games became strategic under the Epyx label. In their 1984 *The World's Greatest Baseball Game*, the actual statistics of major league ballplayers are in the program. Instead of moving stick figures around the screen, you juggle statistics and make decisions. Epyx games almost always require players to use their brains more than their thumbs.

At the same time, Epyx is well known in the States for their distinctive graphics. One look at *Summer Games* is proof of that. The game includes eight Olympic events, the opening ceremonies, and the flags and national anthems of 17 nations. Before this program, most people doubted that it was possible to pack so many detailed images into a Commodore 64 program. It's sold a quarter of a million copies so far, which is double platinum for any computer game.



Last year's deal with Lucasfilm (*Star Wars*, etc.) assured that the graphic excellence would continue. Four Epyx/Lucasfilm games have been released, and more are on the way. In my opinion, *Ballblazer* — sort of an intergalactic soccer game — has the most exciting graphics of any computer game. The Lucasfilm titles are distributed by Activision in the U.K.

Recently, Epyx has expanded to include non-entertainment software in their catalogue. Last year they scored big with *Fast Load*, which "transforms your Commodore disk drive from a lumbering hippo into a leaping gazelle." This year they've released the popular spreadsheet *Multiplan* for the Commodore 64 as well as *The Programmers' BASIC Toolkit* which gives 64/128 owners assembly language power using simple BASIC commands.

Talk with the boys

That brings us up to the present. What about tomorrow? Recently I had the opportunity to sit down with Bob Botch, Vice President of Marketing, and Matt Householder, Product Manager of *Winter Games*. We chatted about the company, their latest success, and the future.

D.G.: Do Epyx games sell differently around the world?

B.B.: In most cases, no. *Impossible Mission* was an exception. It was never a super hit in the United States. But in England, Europe and Australia, it won Game of the Year. It's been our bestseller overseas.

D.G.: Europeans don't play much baseball or football. How did *The World's Greatest Baseball Game* and *The World's Greatest Football Game* do over there?

B.B.: There's a lot more interest in those sports than previously, but they weren't

in Silicon Valley

big sellers. The problem is that both games are strategy intensive, not action games. If you don't know all the rules of the game, it's not much fun. It's the same thing with soccer. You don't see many computer soccer games in America.

D.G.: How did your *Fast Load* program come about?

B.B.: Our programmers thought there was a handicap with the Commodore disk system. It just wasn't loading fast enough. So we took the computer and disk drive apart to see what made them tick. They came up with a technology that they thought would override certain operating systems. We were really experimenting with it as a device to put on our own products. Since then we've gone way past that and developed

comfortable with us.

D.G.: They really hit the mark with *Ballblazer*.

B.B.: That one was originally designed for the Atari computer. The designer was a very brilliant guy who used every last inch of that computer. When we tried to port it to the Commodore 64, we ran into more problems than we expected. It was custom made for the Atari.

D.G.: Does Epyx buy programs from outside developers?

B.B.: We have a development group that looks at products from the outside. We're constantly looking for submissions.

D.G.: The computer industry in the States had a rough year in 1985. How do you reply to people who say the home computer is dead?

B.B.: If they could see our sales numbers every month, I think I could change their minds.

D.G.: Let's talk about your latest hits. Did the same people create *Summer Games*, *Summer Games II* and *Winter Games*?

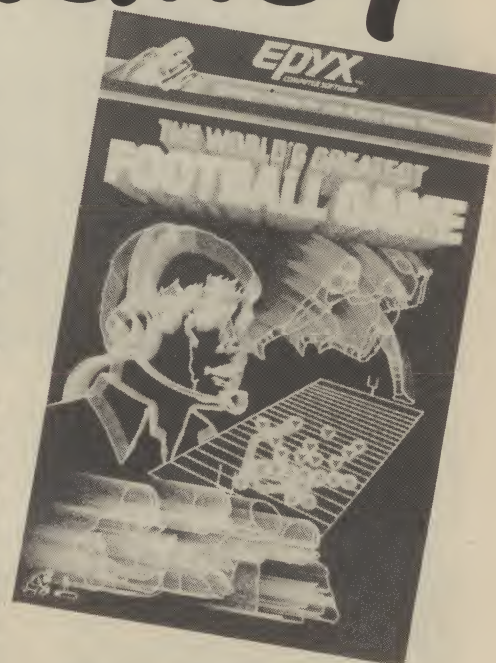
B.B.: *Summer Games* and *Summer Games II* were done by the same group of people. They didn't do the graphics or coding for *Winter Games*, only because they were all working on other projects.

D.G.: Matt, what was your role in *Winter Games*?

M.H.: The game itself was mostly carried out by Bob Ogdon of Action Graphics. But it was a team effort. A different person did each of the translations for the Apple II and Macintosh. My job was to do the general troubleshooting and firefighting.

D.G.: Firefighting?

M.H.: That means to identify problem areas and see that they're fixed. For instance, in the biathlon event, we originally didn't have the logic for loading the shell and ejecting it. You just fired the shots off. My contribution to the game was to suggest that we cock the gun and eject the shell before firing. It seemed to round out the fantasy of firing a rifle. That decision was made about a week before the game was done.



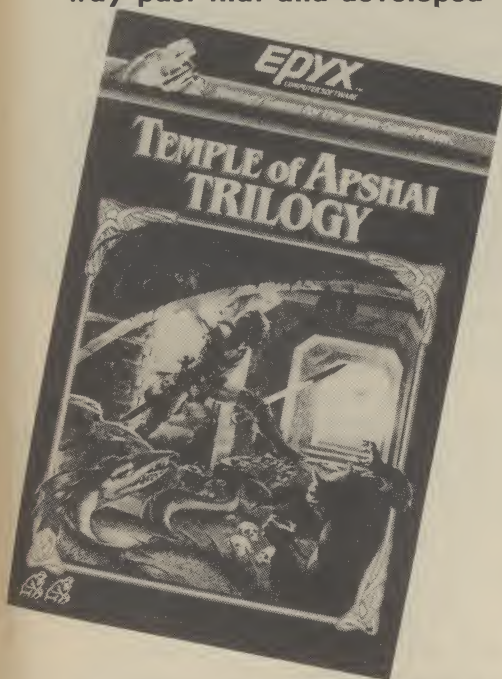
And in the bobsled event, you'll notice that the sky scrolls by when you turn corners. Originally, the scrolling wasn't smooth enough to meet Epyx standards. I suggested that the sky be scrolled more smoothly and suggested techniques for doing that. That was harder on the Apple version than the Commodore version.

D.G.: How long did it take to finish the whole program?

M.H.: The total conception to completed product took nine months.

D.G.: Each event in the program has its own musical theme. Did one guy do all the music?

M.H.: Yes, David Thiel. He did

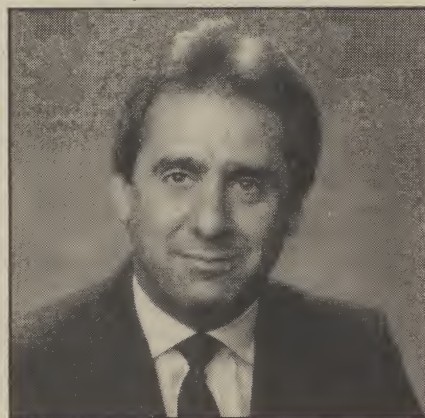


our "Vorpai system," which is even faster than *Fast Load*.

D.G.: How did you team up with Lucasfilm?

B.B.: We started talking to them some time ago, not knowing they were tied up with Atari. As it turns out, Atari was sold and the new management decided not to go into the game area. I would guess Lucasfilm spoke to everybody in the industry. We felt comfortable with them and they felt

Bob Botch contemplates profits on an even more epic scale.



Continued on page 71

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the music on all formats of the game, and it really shines on the Commodore 64 version. David wrote the original music, and he wrote the code to implement it.

D.G.: What made you choose ski jump, bobsled, figure skating, hot dog, speed skating, and biathlon as the events?

M.H.: We considered all the winter events we could think of. We picked the ones we thought would be exciting, and we wanted a broad variety of action events, skill events, and creative events, like the figure skating. Speed skating was added pretty far into the development. We thought that we needed a very simple "joystick-buster" event — something to put a little adrenalin into the product.

D.G.: Are you planning any games for the Commodore 128?

B.B.: The 128 mode is really not a "game" mode. As far as our games are concerned, they will be 64/128. As of yet, we have not found a way to use the 128K and still use all the graphics that the 64 has to offer.

D.G.: What are your plans for the Amiga?

B.B.: We will have *Winter Games* out in the U.S. in April. We have one event done — the ski jump — and it's unbelievable. Our plans are to have three products on that machine by April.

D.G.: Matt, what's your impression of the Amiga?



Epyx's latest game, *Eidolon* — Activision UK reckons it wipes the floor with Koronis Nift and *Ballblazer*.

M.H.: It's a professional quality machine especially for people who are artists, designers, and musicians. The translations, we're doing are going very smoothly. We're porting the graphics from the C-64 to the Amiga, and then we're going in and making them look like Amiga graphics. *Winter Games* on the Amiga will have 32 colours, instead of 16. The same events will be on the Amiga version.

We haven't decided on the controls yet. The Amiga comes with a mouse, but it's not the most ideal control.

B.B.: Let's say there won't be a *Winter Games II* but there will be something I think the public will like just as much next year.

D.G.: Spring Games? Fall Games? World Games? The Miss America Pageant?

B.B.: I won't tip my hand on that one. Next fall we'll have something that will be as well received as *Summer* and *Winter Games* were, and I think it will be even better received in England. That's just a teaser.

D.G.: Will there be a *Winter Games II*?

Bob Ogdon, who created *Pitstop* for Epyx, was the programming genius behind *Winter Games*. We asked Bob if there were any obstacles he encountered in the design of the game. "About a million," he replied. We don't have room to print them all, but here is a brief behind-the-scenes look at each event in *Winter Games*.

FIGURE SKATING: "We took pictures of the Olympic videotapes and digitized the images from the camera. The digitizing wasn't that clean, but it gave us an idea of motion and balance. Then we did hand sketch animations of all the steps and entered them in our system. There was so much animation that memory was a tremendous problem. In fact, memory was a problem in *all* the events. We wanted to have roses thrown out of the stands at the end of each performance, but it was impossible."

SKI JUMP: "It's truly an exciting, scary event, and we wanted to portray that. The idea was to give you a close-up of the person in the air, and at the same time give you the overall picture. The computer is constantly pushing the figure in a random direction and you have to correct it. As soon as you get straight, the computer chooses another direction and pushes you that way. It's relentless. It doesn't

stop pushing you until you get close to the ground."

HOT DOG: "This one was really a lot of fun. The key is to spend time learning how to do each manoeuvre and when to come out of it. The whole thing is timing — how long to hold the position. Each move has an exact correct time associated with it. You've got to do two moves to get the high scores."

SPEED SKATING: "We took the bicycling event from *Summer Games* and made it into a rowing event for *Summer Games II*. Then we took that rowing event and turned it into speed skating for *Winter Games*. We just changed the art and twiddled around with it a little bit."

BIATHLON: "It was put in there to make something completely different. It breaks up the pace of the other events, which are more tense, action/reaction type of things. You have to learn a different set of skills. If you overwork yourself, you won't go

as fast as if you go in the correct rhythm. For the backgrounds, we shot some scenes of the Olympics with a camera to get an idea of where we were going to go. The rest was done freehand by Steve Johnson. In this event we talked about showing different views of the skier, but we decided to stick with the side view."

BOBSLED: "This was definitely the hardest event to program. The Commodore, Apple and Macintosh don't lend themselves to moving a lot of data quickly. In order to get the sensation of motion going down the track, we had to do a lot of updating of fairly large image areas. We had to do some fancy compression. The whole trick to winning is to get your inside runner exactly on that little line at the bottom of the curb. That'll give you the perfect score. I've never been able to do it. Originally, the athletes were supposed to push the sled out and get on it, but we ran out of memory."



Ugly Duckling

by Bohdan Buciak

Rotronics DX-85 printer reviewed

To get good quality print from your Commodore micro you've simply got to buy a non-Commodore printer. And that involves you in all kinds of interfacing problems. Wouldn't it be nice if you could just plug in a cartridge? That's just what the Rotronics DX-85 lets you do. It may not be a thing of beauty but you can't judge a printer by its cover.

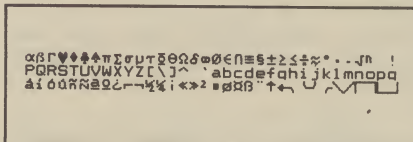
A printer with a "British Made" symbol on it is a rare sight these days. But the most striking thing about the Rotronics DX-85 dot matrix printer (Samleco if you take the sticker off) is that it's an ugly beast.

That's due to the fact that it's been around for over a year now in the corporate market. Rotronics has now decided it's ready for the home. The innards may be tried and tested, but outwardly it resembles the back end of a Ford Popular and weighs as much as a month's groceries.

Exterior looks aside, the DX-85 has lots to commend it, primarily its ease of connection to your Commodore. No fiddly interface adaptors to buy, the DX-85 offers optional plug-in interface cartridges: Commodore, Centronics or RS-232. It's also Epson-compatible, aiming to compete with the low-end Epson (RX, FX) and Star SG machines. At £233 (inc VAT) for the Commodore version, it just pips the Japanese at the post.

The Specifications

The DX-85 is an 80 column printer (136 columns in condensed mode) which prints bi-directionally at 120 characters per second. It's got a 9 by 9 print matrix which gives true descenders — the tails on letters



Example of the DX-85's print quality.

like 'p' and 'g'. You can also get double-width, underlined and emboldened characters.

Although it copes with both single-sheet and continuous stationary, there's no lift-off tractor feed like the ones you get on

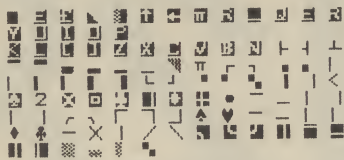
Star or Epson models. Instead, a tractor appears at either end of the rubber roller together with two paper retaining clips.

This is a neat idea but it adds to the already clumsy method of inserting paper. Another clumsy device is the knob that sets the gap between print-head and paper — a Heath Robinson affair if ever there was one. At least the ribbon cartridge is simple to insert. It's a type used by Mannesman Tally so replacements should be easy to acquire.

Round the front, there's the usual panel of lights and switches: on/off line, form feed, line feed (unusually there's buttons for both up and down), power and error lights.

Getting inside the machine is simplicity itself. The cover is hinged at the back and lifts up rather like a car bonnet — no clips or screws to unfasten. Under the bonnet, sorry cover, is a staggering array of 28 DIP switches. Luckily, some of them apply only to the particular interface you're using, and they're large enough to be set with your finger rather than fumbling around with the usual toothpick.

The chassis and print mechanism might well have been conceived by an oil rig designer. There's lots of chunky metal bars and a motor that could drive a milk float. I didn't try it, but this machine could probably survive a headlong trip down the stairs. The insides are lined with foam rubber to dampen the print screech — it works well, too.



Commodore graphics are reproduced faithfully.

Up and running

The DX-85 on review came supplied with a Commodore interface cartridge that simply plugs into the slot at the back. A serial DIN cable connects it to your micro or disk drive. The printer can be set to device number 4 or 5 through one of the DIP switches, and to accept either Commodore or Epson control codes.

With this set-up, the DX-85 behaves like a standard Commodore printer, and you'd specify such in the 'customisation' facility on any proprietary software you're using. When you print program listings, the standard OPEN and CLOSE format is used; Commodore graphics and control characters are reproduced faithfully.

The DX-85 worked well with all the software I could throw at it, which expected to output to a Commodore printer — from wordprocessors to databases to accounts programs. But you'll need to fiddle with DIP switches to get correct settings for the paper you're using.

It also dealt with a variety of graphics packages that offer a screen dump facility.

Print speed was faster than the Epson RX models with the added bonus that line feeds were also quicker. Print quality looked identical to the Epson RX in terms of dot spacing and density. But setting the DX-85's print head closer to the paper gave an even denser and rounded look to characters.

The user manual is a chunky ring-bound affair that contains just about all the information you'll need including setting up, troubleshooting and technical descriptions and diagrams for each of the interfaces (in my copy the Commodore interface and troubleshooting sections seemed to be missing despite being mentioned on the contents page). The Commodore programming section shows you how to use CHR\$ commands for text/graphics modes, line/form feed, reverse and double characters etc, and lists some short Basic programs.

Interfaces and prices

The choice of interfaces alone makes the DX-85 an attractive proposition. In short, you've got a true Commodore printer which can still be used if you decide to upgrade to a non-Commodore micro. And there's none of that messing around trying to find an interface adaptor that actually does what you want it to.

Now for the prices: as mentioned, a DX-85 with Commodore cartridge costs £233.95. The same model with Centronics interface comes in at £199.95. So to

acquire both interfaces you'd probably buy the Centronics version and pay another £33 for the Commodore cartridge. By the way, an RS232 set-up would cost £217.95 (all prices include VAT). In all, that's considerably cheaper than the more popular models, plus a reasonable interface adaptor.

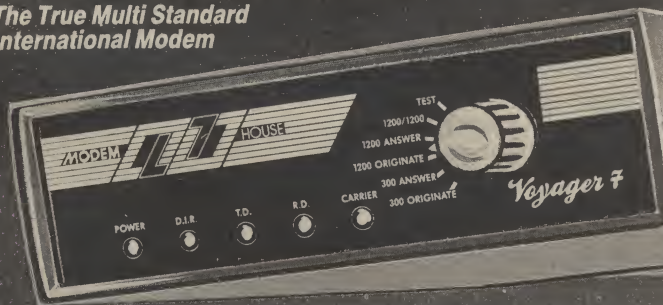
Conclusions

Apart from its looks and the cumbersome method of paper insertion, there's little about this printer to be faulted. It's quick, built very robustly and looks like being reliable under heavy use. It seems to emulate a Commodore printer without problem with the advantage of compatibility with other computers. Even on the first point, Rotronics reckons the DX-85 will get a facelift in the early part of '86 — it sure needs one. The DX-85 may be an ugly duckling but, at the price, it's got to be a bargain. ☐

- DX-85 dot-matrix printer
- Rotronics Ltd
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Marlborough Trading Estate
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High Wycombe, Bucks
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Here it is, our comprehensive roundup of business software specially written or adapted for the 128. We include a guide to acquiring the much-talked about "wealth" of CP/M software, and a preview of the world's most popular database for micros — dBase II.

COMMERCIAL SOFTWARE FOR THE 128

At this early stage, there is not yet a lot of business software available for the 128 — we counted about half a dozen packages available now, with perhaps the same number likely to be coming on stream very soon. Some of these are versions of 64 software upgraded to take advantage of the 128's larger memory and 80-column screen. That means the important parts of the software should be well tried and tested. By the way, all software listed below is disk-based.

Beware of programs that claim to be "128 compatible". All this tends to mean is that they will run on the 128 in 64 mode, without taking advantage of the 128's power.

VIZAWRITE CLASSIC

Price (disk):	£99.95
Distributors:	Viza Software, 9 Mansion Row, Brompton, Gillingham, Kent ME7 5SE (tel: 0634-813780)

Though it came out months after it was first promised, the 128 version of the well-respected *Vizastar* is now available, and seems to have been well worth waiting for. Based on the enhanced version for the Commodore PC-10 and other IBM compatibles, it has some extra facilities which aren't even available for the big brother 16-bit machines, like a pull-down calculator, and the possibility of doing column or row addition or subtraction.

It has so many goodies that it needs to access the 4k in the cartridge, which was originally intended merely as a security device. Text area is about 55k and the second bank is taken up by the huge glossary capability, printer profile and default format, as well as the actual program.

It has a choice of three different typeface fonts for use with dot matrix printers (five on a laser printer), plus true proportional spacing. Emboldening and underlining can be seen on screen and formatting symbols can be removed for very close WYSIWYG (what you see is what you get). A nice touch is that if you are highlighting an area for block move, you can specify that it looks for the next

occurrence of a character (say a full stop), and it will zip to that, speeding up the process considerably. It can produce near-letter quality on 801 or 803 printers and supports Epson and compatibles and all Commodore printers. Configuring any other printer is very easy.

Interestingly, it is claimed that with a £20.70 RS232 cable attached to the 128 user port, it is possible to access electronic mail without leaving *Vizawrite*, and send documents. This cable can also be used with serial printers. A similarly priced parallel cable for Centronics and other parallel printers is also available.

It is possible to arrange text in up to eight newspaper-style columns and print them out that way. It has fully-integrated spelling checker and the windowing capacity allows several documents to be held in memory at the same time, and text to be swapped between them. Full review next month.

TRANSACTION

Price (disk):	£99.00
Distributors:	Dialog Debden Green Saffron Walden Essex
Phone:	0371 831009

Dialog of Essex have a comprehensive range of business and productivity software for the 128 — some of which have been converted from the 64.

Transact Integrated Accounts offers fully integrated facilities for sales ledger, general ledger, purchasing ledger, and final accounts.

The Book Keeping section of Transact is available separately at £49.

STOCK AID CONTROL

Price	£34.00
Distributors:	Dialog address as above

128 WORKO

Software Roundup by Karl Dallas

Full stock control program with all necessary facilities. These include Current Unit Trade Prices, Current Unit Sales Prices, Last Entry Dates and Details, Minimum Stock Levels, Re-Order Account, and many more.

HOME ACCOUNTS MANAGER

Price	£34.00
Distributors:	Dialog address as above

Getting the computer out of the cupboard setting it up, plugging it in, and then loading a piece of software may seem like a long-winded way of running the family accounts. The incentive is now much greater thanks to the sophisticated packages made possible by the 128. Dialog's Home Accounts Manager is an early example. Features include expenses, bank account, cash dispenser, as well as an address file.

Like all of Dialog's 128 programs Home Accounts Manager is available in 40 and 80 column screen formats.

TEAM MATE

Price (disk):	£49.95
Distributors:	Team-Mate Software Debden Green Saffron Walden Essex CB11 3LX

A single-disk integrating package (from America), linking 80-column wordprocessor, spreadsheet, database and hi-res graphics. Data can be moved between programs without changing disk. There's

also a 'windowing' facility allowing you to view data whilst working on another program.

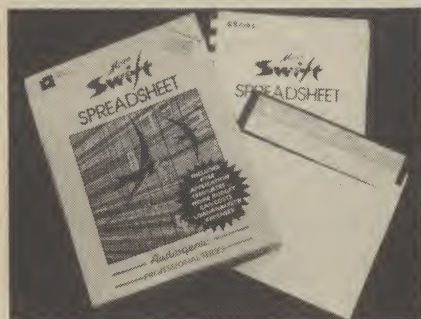
Spreadsheet gives a tiny 17 column by 50 row format whilst the database gives a max storage capacity of 999 records, with 17 fields per record and 38 characters per field. Hi-res graphics offers pie chart, bar graph and line graph with positive and negative values, and text. Finally, the wp section has a 'view' facility allowing you to see where data will be positioned in file when printed out.

OUT

MICRO SWIFT

Price (disk): £24.95
Distributors: Audiogenic, PO Box 88, 34-36 Crown Court, Reading, Berks RG6 1AZ (tel: 0734-664646)

Max No. of Cells (Hor): 64
Max No. of Cells (Ver): 254



This runs more or less the same as the familiar 64 version, except that the maximum number of horizontal cells has been increased to 64. It's a good, easy-to-use, fairly powerful sheet, with pull-down menus which make things easy for the first-time user, but aren't so handy for the more experienced, who may find them infuriating.

However, they'll probably be getting into using its Basic-like language to program it, making customised versions a real practicality. The functions available include the usual mathematical, SUM, MINimum, MAXimum, MEAN, COUNT, SQRT (square root), PV (present value), VARIance, and STD (standard deviation), as well as GOTO, IF and IFGOTO, providing automated motion about the sheet.

The packaging has been kept low to cut the price, but it's wonderful value for the money, and actually worth a great deal more.

SUPERBASE 128

Price (disk): £99.95
Distributors: Precision Software, 4 Park Terrace, Worcester Park, Surrey KT4 7JZ. (tel: 01-330 7166)
Max recs per file: Disk-dependent
Max fields per record: 127
Max chars per field: 225 (key/constant fields 30)
Max chars per record: 1107
Programming/variable space: 62k

Widely reviewed, widely praised, Superbase is everything that's been said of it, a little expensive, you might think, but well worth the money. The most notable improvement the 128 version has over the 64 is the extra memory allocated to programs and/or variables, which is a long way up from the 4k programming space available to 64 users (though files could be linked). It can also be held in memory together with Superscript 128.

SUPERSCRIPT 128

Price (disk): £89.95 inc VAT
Distributors: Precision Software Ltd, 6 Park Terrace, Worcester Park, Surrey KT4 7JZ. Telephone: 01-330 7166
Text memory: 726 lines x 80 columns main memory, plus another 255 lines in the second bank of memory, amounting to a total of 78,480 characters.

Slap-on-the-wrists time first: I erred last month in stating it costs only £20 to upgrade from Superscript II on the 64 to Superscript 128. The cost is £69.95, but I still say it's a bargain.

It's an entirely menu-driven program, making the manual almost superfluous. Help screens are available by pressing <F8> (or <F1> <H>). It includes an extensive "glossary", allowing complex keystrokes to be allocated to single-key "macros", and an on-line spelling checker built in. So that it is possible to access even its most sophisticated commands without constant reference to the excellent ring-bound manual. A calculator function allows up to 10 decimal places to be defined (2 are the default), multiplication, division, addition or subtraction (down columns or along lines). The result can be inserted into a document or held in memory for display when required.

Unlike the 64 version, the 80-column screen produces virtually WYSIWYG. There is a VIEW DOCUMENT option, which strips away all the formatting, and shows the document more or less as it will be formatted, highlighting special features like underline, bold, expanded and

condensed type, subscribing and superscripting.

Superscript 128 can be used in conjunction with Superbase 128, and both can be held in memory simultaneously, allowing the user to zip from one to the other, produce mail-merged letters etc.



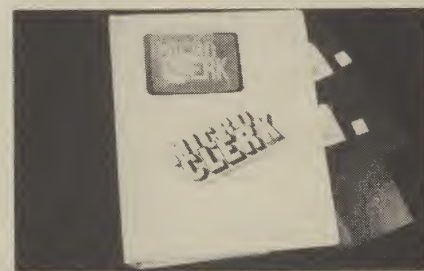
SCRIPT 128

Price (disk): £49.99
Distributors: Commodore Business Machines, 1 Hunters Road, Weldon, Corby, Northants NN17 1QX. (tel: 0536-205555)

Basically, this is Superscript 128 without the spelling checker and macro facility, and very good value at that. Interestingly, it shows its ancestry in the fact that Superbase can be accessed from within it, so if spelling is not your problem, and you don't need macros, the combination represents something of a bargain.

MICRO-CLERK

Price (disk): £99.99
Distributors: Commodore Business Machines, 1 Hunters Road, Weldon, Corby, Northants NN17 1QX. (tel: 0536-205555)



Initial reaction to this new product is that it is one of the best "integrated" packages to come on to the market. Unlike most of those which adopt that somewhat overhyped capability, this is more accounts oriented, containing within it a cash accounts module that alone would be well worth the price of the package.

It also contains a modest word processor with mail merge, database, and equally modest spreadsheet (26 columns by 52 rows) and what is known as a jotter, for writing (and printing, if required) notes, memos, etc. A nice touch is the ability to

Precision Software's **Business Software Family**

for your
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Superscript

**The Intelligent
Word Processor**

"If you need a sophisticated and powerful word processor... this is the ultimate."
Trevor Doherty, *Commodore Horizons* July 1985

What is Superscript? -

Superscript combines word processor, spelling checker, calculator and mailmerge facility, all in one package. So Superscript gives you all the tools you need to produce high quality reports, tables, lists, personalized letters and even labels quickly and efficiently. Superscript is a remodeled and vastly enhanced version of the popular **Easy Script** and **Easy Spell** programs that have sold more than 350,000 copies worldwide, so you **know** you can rely on it.

Simple for the beginner

If you are a newcomer to word processing, Superscript's simple command menus put you immediately at ease.

Each command is a single word, and for each command there's an extra line of helpful description. To select a command, you simply move the cursor. You don't even have to type the command!

Once you are more familiar with Superscript, you can bypass the menus.

Powerful for the experienced user

Superscript also gives you the ability to *cut work down to a minimum* by storing your own command sequences or text on single keys. This means that with a single keystroke you can reproduce commonly used phrases or multi-line addresses from a glossary, load in document formats or execute a pre-programmed sequence of operations. *That's intelligence!*

Editing options

Superscript gives you all the editing options of a business-style word processor, with full block manipulation for cut-and-paste; overwrite or text insertion modes; search and replace with pattern matching and optional case discrimination; backward search; case shifts for single words or larger blocks of text. *And much more.*

Good with numbers

Superscript allows you to extend your editing line up to 240 columns for wide documents like financial statements, and with decimal tabs it's easy to enter properly justified tables of numbers.

Superscript's complete set of calculator functions can be used interactively, or you can operate on numbers from the text of your document. Apart from the usual mathematical functions like add, subtract, multiply, divide, and percentages, you have the ability to add rows, columns or even whole tables.

Good with spelling, too

The built-in spelling checker goes right through your text, checking the unique words against its dictionaries, and stopping at each one it does not recognize. You have the option to correct the error, learn the new word or ignore it. Superscript has its own 30,000 word dictionary. In addition, it stores new words as it learns them.

Mailings with Superscript

Personalized mailings are easy with Superscript. You can enter the data manually or use data extracted from your spreadsheet or database. Merging can be selective with equal-to/not-equal-to logic. A mailing labels template is included to help you complete your mailing and you can alter the template to suit your own label format.

Attention Easy Script users!

If you're an Easy Script user, then Superscript is the obvious choice. With its enhanced features and more powerful facilities, you'll be able to do so much more. There are no compatibility problems either. You can run your Easy Script data or Easy Spell dictionary disks under Superscript.

Superbase

**The Programmable
Database**

For sheer quality and professionalism,
Superbase is in a class of its own.

Easy to get started -

The first thing you'll notice about Superbase is the superb 230 page owner's manual.

The tutorial section takes both first-time and experienced users right from first steps through accomplished programming, while the reference section is a model of completeness. You'll enjoy the manual's easy style, its plentiful illustrations and comprehensive index.

Easy to use -

You'll soon be ready to set up your own filing system - business information, professional data, records of all kinds. You design your record layout right on the screen, exactly as you wish it to look, with helpful on-screen explanations never more than a step away.

With the layout in place, you can then use Superbase's built-in commands to enter, change or delete individual records. Once you have built up a file of records, you can select, sort and output data exactly as you need it. To begin with, you'll be accessing Superbase commands through menus. The menus lead you step-by-step to the required action. Nothing could be simpler!

The hidden power -

As you become more familiar with Superbase, you'll want faster ways of accessing commands. One way is through the command line. Any sequence of menu options can also be typed directly onto the second line of the screen, known as the command line. *But this is just the beginning.*

The *real* power of Superbase is that you can string any number of these commands together to form complete programs. When writing programs, not only do you have access to the dozens of powerful Superbase commands: you can also use the complete set of ordinary BASIC language commands.

This capability turns a straightforward data management system into a true database of incredible power.

Developing complex applications for yourself becomes a realistic proposition, with your hardware configuration as the only limiting factor.

The integrated office -

Superscript and Superbase will actually load into the computer's memory together.

This means that you can switch between Superbase and Superscript at will passing information between the two and working on your filing system and documents without ever having to reload. *That's integration!*

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Format	Disk

An excellent accounts package already reviewed in its 64 version, this 128 version is claimed to be faster than the original and also now incorporates payroll. Not ready at the time of writing but expected to be out by February.

Almost free CP/M software

Though good business software that takes advantage of the increased memory of the Commodore 128 is beginning to come on to the market, it is the machine's capability to handle CP/M which will attract many people's attention.

After all, when the specific 128 programs can be numbered on your fingers and thumbs, CP/M offers the only real area where the machine has any serious advantage over the cheaper and well established 64. Last month, we pointed to the fact that there is an awful lot of powerful proprietary CP/M software, often bundled with machines like the transportable Osborne and Kaypro machines, which ought to run on the C128.

But even second-hand, such powerful software is likely to set you back something the wrong side of £100. However, it is possible to get really powerful programs for only £2 plus the cost of a disk, if you join one of the organisations distributing what is called "public domain" software. You can even save yourself the cost of membership fee, postage and disk by getting it via the *Bulletin Board* of the *Public Domain Software Library* — though in this case, you should budget for quite a phone bill, since the Board operates at 300 baud, taking about 15 minutes to download a reasonably small program to you over the phone lines.

Software Sources

What is "public domain" software? Well, if you are a member of ICPUG, you'll probably know the answer to that question. It's been making available Commodore-format programs free to its members for some years. And rumour has it that they're now to start making CP/M software available to members under this scheme. There is also a specialist UK CP/M users' Group who have a useful library of programs.

However, probably the biggest range of such "free" software is that available from the guy who runs the above-named *Bulletin Board*, Rod Smith, who has over 1000 double-sided disks available, and all

for a couple of quid each (£1.50 if you order more than ten). And, as I say, *no* membership fee.

Not all of these are suitable for the 128's CP/M mode, of course. And, bear in mind, the disks tend to be double-sided, which means that if you are going to use them on a 1570 drive, which only handles single-sided disks, you'll need to have each disk transferred on to two of your disks. For lengthy programs, which may need to use overlays to overcome the intrinsic 64k limit on CP/M transient program memory, this could be a problem.

Another consideration is that most "proper" CP/M machines tend to have two disk drives, and many programs assume this.

Downloading software

Anyway, back to public domain software. For a taster of the sort of things available, and if you have a modem attached to your computer, you might like to try accessing Rod Smith's *Bulletin Board*. (You can do this if you've only got a 64, of course.) You'll get it on 0342-315636 and you'll need to be configured for 300 baud send/receive, 7 data bits, one stop bit, even

parity. You'll also need some kind of TTY software. There's a simple TTY-type program available on Compunet.

Since the range of software is so large, the most useful thing to do is to send Rod a large self-addressed envelope with 26p in stamps and ask for a complete catalogue. You'll see he has lots of useful things like dBase II utilities, which can make that program even more useful, and even a little friendly.

Public Domain Software Library,

138 Holtze Road,
East Grinstead,
Sussex RH19 3EA.

Tel: (voice calls) 0324-313883

Independent Commodore Products Users' Group,

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Newbury Park,
Ilford, Essex IG2 7EP.

Tel: 01-597 1229

UK CP/M Users' Group,

72 Mill Road, Hawley,
Dartford, Kent.

A look at dBase II

dBase II is probably the most famous CP/M package you can get for your 128. It shares two things with the equally illustrious *WordStar* (reviewed last month): it uses similar key combinations to get around the screen (<CTRL> + <S> to move one character left, <CTRL> + <D> to move to the right), which are rather cumbersome when you're used to the simplicity of Commodore screen handling and cursor control commands. It is also a bit unfriendly.

In fact, compared with *WordStar's* menu screens and generally available on-line assistance, your first encounter with dBase II will be positively gnomish. After the usual copyright display, you'll be presented with possibly the least informative prompt in the world of computers. After that, things get a bit more friendly. The commands are fairly obvious: *create*, to set up a new database, *use*, to access it, *append*, to add new records, and of course *quit*, to end a session. Commands can be abbreviated to four letters, so that *appe* will be interpreted as *append*, *crea* as *create*, etc. There is also a "help" facility, which can be used on its own, or with one of the commands, so that typing ".help create <RETURN>" will tell you all about setting up a database.

This is one of those programs in which you have to be very clear in your mind about what you want it to do before you start using it. You need to work out the length of each field in your record, decide whether it is to be alpha or numeric, how long it will be (including decimal points and leading + or - signs, if it's numeric), etc. Numeric information (which can be totalled, multiplied etc in a quite sophisticated way, meaning that you could use dBase II set up a powerful accounts system of your own) is accurate up to ten digits, eg, up to 99999999.99.

There is also a third type of field, called a *logical* field, which requires a single-letter input, either Y or N (for yes or no) or T or F (True/False). The response can be either upper or lower case. Field names cannot be longer than ten characters long and must not contain spaces, though other alphanumeric keys can be used. They will be displayed in capitals, even if they are entered in lower case.

The maximum number of characters per record is 1000, which may be spread across up to 32 different fields. The maximum number of records you can have in any single database is 65535 — but it's only fair to admit that you'll run out of disk space long before that.

Dozens of books have been written about dBase II, so I can't hope to cover its complexities in a few hundred words. But believe me, it is powerful, and its complexities are worth mastering if you need that kind of power. Even second-hand, it's unlikely to come cheap (about £150 seems to be par for the course), but it's worth it.

You may get lucky and be offered a disk on its own, sans manuals. Well, as I've said, there are plenty of books available (my favourite is M. de Pace's *Working with dBase II*, £7.95 from Granada) so if the price is low enough, you may be getting yourself a bargain. But don't blame me if you get lost.

Using dBase II without adequate documentation is worse than adventure gaming — and it can be far more frustrating.

Key question

Dear Tommy, Could you please tell me if it is possible to program a particular key, if when the power is turned off and powered up again, it will still be in the memory.

Also please could you tell me how it is possible to play music while loading a program on the 64.

While it is possible to program any key to produce a particular string of characters, or cause a jump to a machine-code routine, this will all be lost as soon as you switch off the computer. Since any key definition done by the user must reside in RAM, this is unavoidable. The only way round it is to use something like the Soft-Prom from Zero Electronics, which enables you to program your own cartridges, including Auto-Start. While this would achieve the aim, at £35 it seems a trifle expensive! The only other way is to have the necessary machine-code in a program file which you load in as soon as you power up the machine.

Playing music while loading a program is only possible if you also write your own loader routines in machine-code. The music is played by using 'interrupts', which are generated by the computer every 50th of a second; they can be made to cause a jump to a user written m/c routine before carrying on with the normal 'house-keeping' tasks. Unless you are a wizard at machine code and using interrupts, I should leave this one to the software houses.

16 Spirals

Dear Tommy, At present, I own a C16 computer, and have been reading your magazine ever since the day I bought the C16, (Good Friday).

I would like to ask "Tommy's Tips" how I can draw a spiral on the C16? Many thanks for a great mag.

Always glad to oblige, here is a program to draw a spiral that uses the built-in 'circle' command. By altering the value of SP in line 10 you can change it to draw any size of spiral:

```
10 GRAPHIC1,1:SP = 8
20 FOR X = 1 TO 100 STEP SP
30 CIRCLE,150,100 + SP/4,X,,0,180
40 CIRCLE,150,100-SP/4,X + SP/2
,,180,0
50 NEXT
```

Colour trouble

Dear Tommy, I have just purchased the new C128 computer but when I switched on, the TV screen was black and white. My TV is a Ferguson 14" colour, (the one which has been advertised on TV). I have used the TV with a Tandy Colour Computer and everything worked o.k. I've tried tuning the TV but it was still the same.

Can you advise me?

I assume that you are not using the



Ferguson TV/Monitor since you refer to 'tuning' the TV. If despite tuning from one extreme of the picture to the other you can get no colour signal then it seems likely that the TV modulator or video chip in the computer may be faulty. If you have access to a colour monitor then check if the composite video output is producing a colour picture. If not, then it is certainly the video chip that is at fault; if it does, then this indicates a modulator fault.

Either way, I suggest you contact your dealer who can test the computer and replace it if faulty.

Just in case you have got a TV/Monitor and are using the composite video inputs, then check that your lead is connected to pin 4 of the 8-pin DIN plug and not Pin 1; the latter produces only a LUM/SYNC signal, the colour being carried on Pin 6 (CHROMA signal). Using Pin 1 alone will produce a B&W picture even on a colour monitor.

Plus/4 Blues

Dear Tommy, I have recently acquired a Commodore Plus/4 and have found that I cannot get games for my computer in the shops in my area. Would Commodore 64 tapes or cartridges work in my Plus/4? I noticed in recent issues of *Commodore User* that there are no programs for the Plus/4 and will there be any in the near future? I look forward to hearing from you.

Unfortunately a lot of shops are not bothering to stock software for either the 16 or the Plus/4, presumably because they are afraid if they get withdrawn they will end up with unsold stock. However, all is not lost because you can order software for all Commodore machines from **SOFTPOST**, Commodore's own software

Tommy is our resident know-all. Whether you've got a technical problem on the 64, 16 or Vic, Tommy's at the ready with pearls of wisdom, advice and information. Go on, write to him: Tommy's Tips, *Commodore User*, 30-32 Farringdon Lane, London EC1R 3AU.

sales dept. The telephone number is **0536 63212** and they can send you a catalogue which includes a range of 67 games/adventure programs for the 16 & Plus/4.

As for using software or cartridges designed for the 64, the answer is they are completely incompatible. Even if you could get programs to load, they cannot be converted easily since the Plus/4 has no sprites, different sound facilities, a different Basic and a totally different memory map. As for programs appearing in the mag, it's up to the readers with Plus/4s to get writing and submit their programs for publication; so come on all you Plus/4 owners — how about it?

Protection problem

Dear Tommy, I am writing a quiz game for my 16. I am thinking of putting it on general release to the public. I am very concerned about security in the game. To put a 'Holographic' sticker on the front will mean a lot of fuss and expense. I tried a Vic poke on it to disable the run stop key. It did the job, but it left a flashing cursor, even when 'getkeys' were used. Is there a way to disable the run stop key and is there an easy way to make the game

auto-run? Answer will be absolutely appreciated.

To disable the STOP key on the C16, **POKE 806,115**. To get a program to Auto-run you can use the same method as for any other Commodore machine. If you have a program that LOADs a second program, then the second program will run as soon as it is loaded into memory. You must therefore create a short loader program which disables any keys, sets a few values in memory (for later checking to ensure it was run) and then LOADs the main program.

The thing to ensure is that the Basic pointers are set correctly for the second program. To do this, load the main program into memory and **PEEK** addresses 45 & 46. Then put the values you obtain into the following line in your loader program: **10 POKE 45,X:POKE 46,Y:CLR** where X and Y are the values from the PEEKs.

Don't think that this is in any way fool-proof, since software houses have spent thousands of pounds trying to make their games secure from copying. It is almost more efficient to have a low selling price than spend a lot of time and effort on protecting it totally. The cheaper the software the less incentive there is to spend time trying to copy it.

Dynamic duo

Dear Tommy, I own a Vic-20 (USA model) and a Commodore 64 (European model). Convinced that the Vic-20 must still have some use I tried to use it as a terminal for the C64, using the programs in the 'Programmers Reference Guide'.

On the user port of each machine I connected common, Tx and Rx lines, crossing the Tx and Rx lines between machines such that the Tx of the C64 was attached to the Rx of the Vic & vice-versa. As I understood the program, characters typed on the keyboard of one machine would be sent to and then printed on the screen of the other machine. Alas — no success!

Checking with a scope revealed that both machines transmitted signals at the same baud rate but apparently nothing was being received. Please could you help?

There are two possible reasons for the non-communication. The most likely is that you have not connected the Received Data line to PBO (pin C on the User port) as well as to FLAG2; in other words, pins B and C must be connected together before you can receive data correctly. If you have got the connections correct (or if you still can't communicate after linking B and C) then the problem is one of timing. You mention that the Vic is a USA model; this will have been set up to run on a slightly different clock frequency to the UK standard. All timings will be affected and if

you apply the system frequency equations you will find that there will be about a 4% difference in the actual baud rate between the US and UK models.

It should not be a problem at low baud rates, but may cause problems as the baud rate is increased. If you cannot get any comms even at 300 baud, try dropping down to 50 baud, by changing line 100 to read as follows:

```
100 OPEN2,2,3,CHR$(1 + 32) +
CHR$(32 + 128)
```

Pin connections

Dear Tommy, I have had a 64 for the past year connected to a KAGA green screen monitor and radio, by a 5 pin din plug and phono plugs, with perfect results.

I have just bought a Vic-20 for my son for Christmas, to allow him an introduction to computing (also to keep him off the 64 at present).

I have also another KAGA monitor and have got a problem getting a good picture on either of them with the Vic. This problem is that the characters are being pulled to one side and it is not possible to adjust it out. Would you please advise the pin connections to use on a 5 pin din plug for the monitor and audio output, also do you know of any companies still supplying Ram packs for the Vic 20.

Your problem with the screen display is that the output from the Vic is not high enough to drive a monitor directly; nearly all Vics suffer from this problem. About the only way round it is to get, or make, a small video amplifier to boost the signal. The pin connections are the same as for the 64 so you can use the same leads.

There are still a few companies supplying Vic RAM packs; **Zero Electronics** (0493 842023) have their own, while the **Morgan Camera Company** (01-636 1138) may still have stocks of Commodore Ram packs at very low prices.

64 Comms

Dear Tommy, I wonder if you can help me with a small problem on my 64. I am in the process of writing a communications program, at the start of which is produced a start-up option page, in which can be selected things like Baud rate, parity, stop bits etc. Unfortunately, when the OPEN2 in the program is reached, in which the variable is to be used, the top 512 bytes of memory where the nominated variables are stored is corrupted, causing the program to stop running.

Is there any way of protecting this

area of memory so as to allow the nominated variables to be used?

Your comments and suggestions would be very welcome.

The top 512 bytes of memory are automatically cleared by the **OPEN<1fn>,2** command and must therefore not be part of the memory available to Basic. This is because opening an RS232 channel allocates two 256 byte buffers, for input and output. The **OPEN<1fn>,2** command also performs an intrinsic CLR, thus destroying any variables that have already been created. This means that you must OPEN the channel before doing any inputs from the options screen.

After you have OPENed the channel you can still alter the baud rate etc **POKE**ing the values into the Control Register (address 659) and the Command Register (address 660).

Another method might be to give a number of alternatives in a menu and then use the selected number in an **ON X GOTO** (or **GOSUB**) statement which then actions a different OPEN statement for each choice.

Colour range

Dear Tommy, If you run the following program for the C16 you'll see that the blue colour will cover a bit of the green. I'd like to know if it's possible to avoid that. I'd like to thank you for a very great mag!

```
10 GRAPHIC 1,1,
20 BOX 1,100,35,220,165
30 DRAW 1,100,100TO220,100
40 COLOR1,6:PAINT1,160,99
50 COLOR1,7:PAINT1,160,101
```

Your problem is due to the fact that in normal hi-res mode you can only have two colours (foreground and background) in any 8x8 'character block' on screen. Because you are trying to have a colour boundary in the middle of a row of these blocks, the second foreground colour replaces the first in the overlap area. To overcome the problem you must use the multi-colour hi-res mode, which allows you to have up to four colours in any block.

By setting Black as the foreground colour and Green and Blue as the two 'multi-colours' your program can be rewritten to not only avoid the overlap problem, but to leave the frame around the box as well. Note that the penalty for using multi-colour mode is that the horizontal resolution is halved, so all the 'X' co-ordinates must be scaled accordingly. The following program will do exactly what you require, demonstrating all the above points:

```
10 GRAPHIC3,1
20 BOX1,50,35,110,165
30 DRAW1,50,100TO110,100
40 COLOR2,6:PAINT2,100,99,1
50 COLOR3,7:PAINT3,100,101,1
60 COLOR1,1
```


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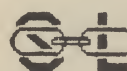
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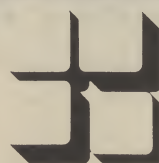


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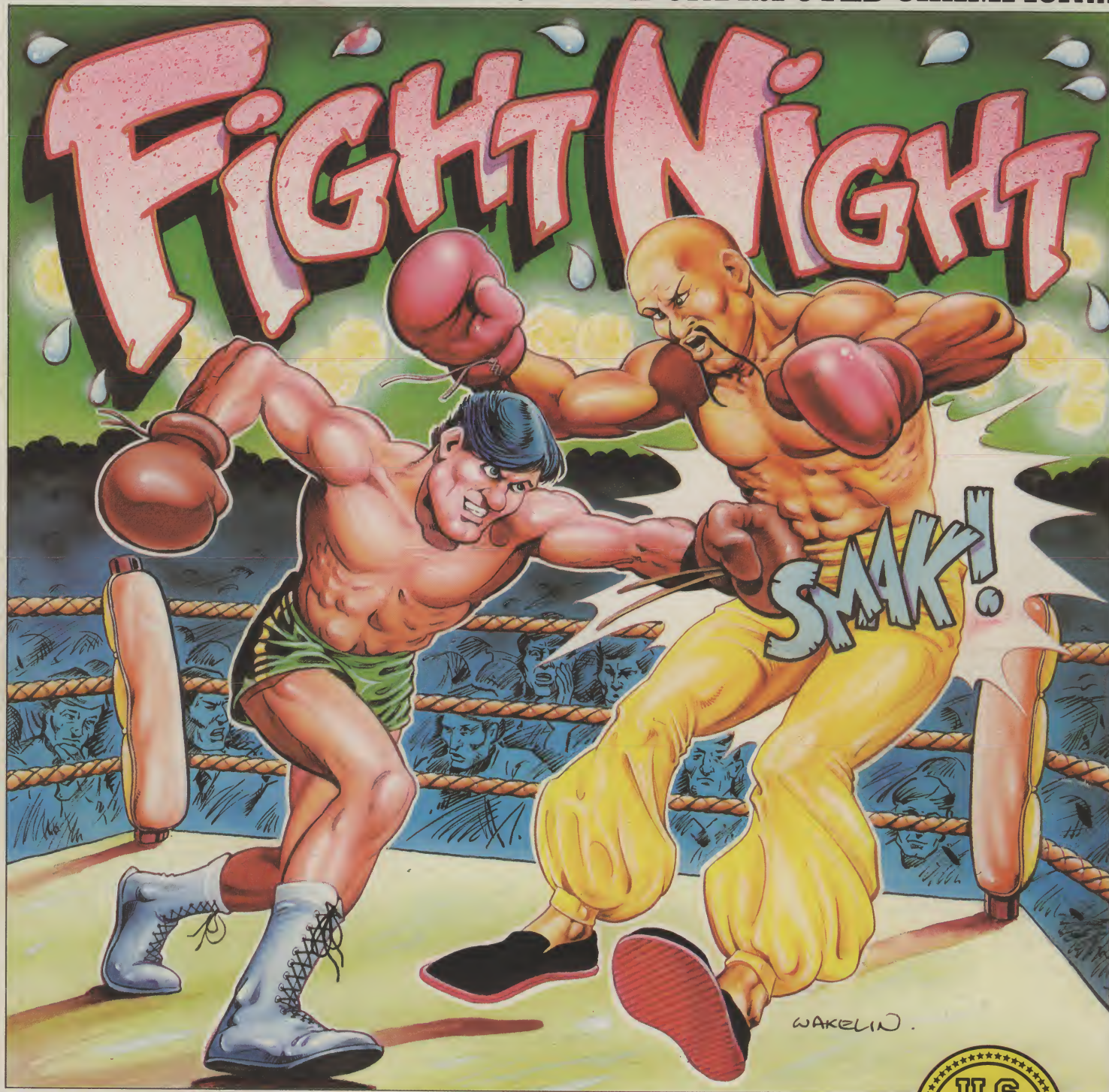


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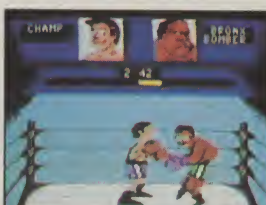
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